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AUTHOR	Hilfiker, Leo R.
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ABSTRACT

An earlier report examined the relationship of school system innovativeness to selected dimensions of interpersonal behavior in eight school systems as revealed through data collected in 1967. The major implication of this study suggested that the climate of the schools might be changed to make them more receptive to innovation from within or from without the system. The study replicates portions of the 1967 study, and has the additional objectives of relating findings to organizational models and delineating characteristics of an innovative school system. System innovativeness is determined through the study of data collected from a random sampling of professional staff members in the eight school systems. The variables studied to determine the ranking of the system include staff perceptions of school system interpersonal process norms, norms of staff meetings, function of the principal, and other influences. Four major concepts examined and related to a framework for organizational growth are organizational health, an organization conceived organically like a living organism, Likert's model of the human organization, and Mooney's model of creative systems. In the final section, a number of generalizations concerning innovativeness are presented following a review of the data gathered from the 8-school study. These characteristics are presented, and a profile of innovative school systems is developed. See previous related study, ED 029 808. (Author)

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Technical Report No. 172*

A PROFILE OF INNOVATIVE SCHOOL SYSTEMS

Leo R. Hilfiker

Report from the Project on Models for
Effecting Planned Educational Change

Max R. Goodson, Burton W. Kreitlow, and Warren Hagstrom
Principal Investigators

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin

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Statement of Focus

The Wisconsin Research and Development Center for Cognitive Learning focuses on contributing to a better understanding of cognitive learning by children and youth and to the improvement of related educational practices. The strategy for research and development is comprehensive. It includes basic research to generate new knowledge about the conditions and processes of learning and about the processes of instruction, and the subsequent development of research-based instructional materials, many of which are designed for use by teachers and others for use by students. These materials are tested and refined in school settings. Throughout these operations behavioral scientists, curriculum experts, academic scholars, and school people interact, insuring that the results of Center activities are based soundly on knowledge of subject matter and cognitive learning and that they are applied to the improvement of educational practice.

This Technical Report is from the Models for Effecting Planned Educational Change Project in Program 3. General objectives of the Program are to develop and test organizations that facilitate research and development activities in the schools and to develop and test the effectiveness of the means whereby schools select, introduce, and utilize the results of research and development. Contributing to these Program objectives, the main objective of the Planned Change Project is to develop and test system-wide mechanisms which local school systems can employ in utilizing knowledge and innovations of the type generated by the Center. Change-agent teams have been organized in area school systems and their effectiveness is being evaluated.

In Memoriam

A Profile of Innovative School Systems was in almost completed form for publication at the time that its author, Leo R. Hilfiker, was killed driving to a professional meeting. The manuscript has been readied by his colleagues in the Planned Education Change Project of The R & D Center including Jeanne Bitkers, teacher in the Sheboygan, Wisconsin, school system and chairman of its change-agent team.

It is appropriate for me to record here for myself and Leo's other colleagues in the R & D Center, the Wisconsin Department of Public Instruction, and his associates in Wisconsin schools our shared fondness and respect for him. We offer his last writing to the larger educational community in which there is a strong striving for the innovative school. The report demonstrates the importance of system characteristics of openness, trust, adaptability and shared decision-making responsibilities for system effectiveness and innovativeness. Those who knew Leo can testify to his commitment to these values wherever he lived and worked. As a scholar and practitioner he combined a sense for ideas and their empirical testing as well as a strong drive for their application to the practical world of education. Those who knew him most intimately will cherish his belief and insistence that the individual be allowed to grow to his full human potential and that given this condition a person can cope successfully with a changing world.

Max R. Goodson

Contents

		Page
	In Memoriam	iv
	List of Tables and Figures	vii
	Abstract	ix
I	The Planned Change Project	1
	The 1967 Study	1
	The 1969 COPED Instrument Revision	3
II	The Problem	7
	Structural-Functional Analysis	7
	The Concept of Organizational Health	8
	Likert's Model: The Human Organization	9
	Summary	9
III	Findings of the Study	13
	Determination of School System Innovativeness	13
	Changeover Time: T_1 and T_2 Variables	15
	Norms	15
	Exploratory Research: T_2	22
	School System Climate	23
	Formal Education, Age, and Experience of Professional Personnel	23
	Innovativeness: Other Patterns	23
	Source and Communication of Innovations	24
IV	Conclusions and Implications	33
	The Major Hypothesis	33
	Hypothesis 1	33
	Hypothesis 2	33
	Hypothesis 3	34
	Other Variables and Their Relationship to Innovativeness	37
	A Profile of an Innovative School System	38
	Implications	39
V	Appendices	41
	A. Biographical Information	43
	B. Climate	45
	C. Do's and Don'ts	46
	D. Meetings	47
	E. Your Principal; Supporting Staff	50
	F. Influence	52
	G. Innovations	53
	H. Innovations—Principals	59
	References	69

List of Tables and Figures

Table		Page
1	Total Number of Full-Time Professional Staff and Students	4
2	Random Sample of Professional Staff Used in Study	4
3	Composite Ranking of School System Innovativeness	14
4	Relationship of Adaptiveness, as Perceived by Professional Staff, to School System Innovativeness	16
5	Relationship of Openness, as Perceived by Professional Staff, to School System Innovativeness	17
6	Relationship of Trust, as Perceived by Professional Staff, to School System Innovativeness	18
7	Instrument Profile of Principals	19
8	Relationship of Executive Professional Leadership of Principals, as Perceived by Teachers, to School System Innovativeness	19
9	Relationship of Social Support of Principals, as Perceived by Teachers, to School System Innovativeness	20
10	Relationship of Openness as Perceived in Meetings to School System Innovativeness	21
11	Relationship of Powerlessness as Perceived in Meetings to School System Innovativeness	21
12	Relationship of Satisfaction with the Amount of Time Devoted to Problem Solving in Meetings to School System Innovativeness	22
13	Relationship of Problem-Solving Adequacy in Professional Meetings to School System Innovativeness	22
14	Relationship of Selected Dimensions of School Climate to School System Innovativeness	23
15	Relationship of Amount of Formal Education of Professional Personnel to School System Innovativeness	24

Table		Page
16	Relationship of Age of Professional Personnel to School System Innovativeness	24
17	Source of Innovations	25
18	Extent of Communication Regarding Innovations	26
19	Perceived Sources of Influence	27
20	Reasons for Not Being More Innovative	28
21	Innovativeness Rankings (Teachers) and Summary of Ranks by Item	29
22	Mean Scores: Innovative Practices (Administrators)	30
23	Innovative Practices Sections—Summary of Ranks	32

Figure		
1	Participative Organization Model for Science-based Leadership	10
2	Relationship of Likert Human Organization Model to School Organization Health	11
3	Integration of Process and Content	35
4	Mooney's Model of Creative Systems	35
5	Adaptation of the Mooney School System Model	36

Abstract

An earlier report examined the relationship of school system innovativeness to selected dimensions of interpersonal behavior in eight school systems as revealed through data collected in 1967. The major implication of this study suggested that the climate of the schools might be changed to make them more receptive to innovation from within or without the system.

The study replicates portions of the 1967 study and has two additional objectives: relating findings to organizational models and delineating characteristics of an innovative school system. Replication is presented of the manner in which innovativeness as a dependent variable is related to specified independent variables.

System innovativeness is determined through the study of data collected from a random sampling of professional staff members in the eight school systems. Variables studied to determine the ranking of the system include staff perceptions of school system interpersonal process norms, norms of staff meetings, function of the principal, and other influences.

Four major concepts are examined and related to a framework for organizational growth. These concepts are: organizational health, an organization conceived organically like a living organism, Likert's model of the human organization, and Mooney's model of creative systems.

The final section presents characteristics of innovative school systems. A number of generalizations concerning innovativeness are presented after reviewing data gathered from the eight-school study. These characteristics are presented and a profile of innovative school systems is developed in the following report.

I
The Planned Change Project

Rapid social change has led many educators to reassess the ways and means by which change takes place in school systems. As a result of this assessment there has been a growing awareness that random and sporadic efforts to improve education have not been profitable. There is an increasing recognition that the problems of social institutions can no longer be solved through a reactive process; reactive in the sense that problems are recognized and handled only after they appear.

The concept of planned change is a viable alternative to reactive problem solving. This concept, as used here, refers to a deliberate process by which the problems of an institution or organization can be anticipated, managed, and solved. In discussing planned change, Bennis, Benne, and Chin (1961) list several key elements in defining the concept. Planned change is distinguished by: (a) a deliberate and collaborative relationship between the change agent and client, (b) the utilization of valid knowledge, particularly in applied social science, and (c) the utilization of a change agent who is a free agent brought in from outside the client system.

Goodson and Hammes (1968) described a set of procedures which they felt could be utilized in the planning for and managing of specific changes in school systems. The key to these procedures was the establishment of a local change-agent team composed of approximately eight to ten members representing vertical roles (teachers, principals, central office administrators, etc.) in the school system. As a result, a Planned Change Project was initiated in selected Wisconsin school systems. Eight school districts participated in the project. A local change-agent team was established in three experimental school systems (Systems A, B, C). Each team received inputs including human relations training, training in methods of data-collection and its interpretation, problem-solving skill training, and training in the utilization of human resources, particularly consultants external to the system. Five other school systems (Systems D, E, F, G, H) served as comparison or control systems. This experiment has been in operation for the past two years. Its results will be reported shortly by the principal investigators of the Planned Change Project.

Within the boundaries of the change-agent experiment described above, another model is being tested. It is the Model for Educational Improvement, constructed to detect information relative to the change processes operating within change-agent committee discussions (Krietlow & MacNeil, 1969). This model is designed to provide a way of coping with the challenge posed by such questions as:

1. By what process do change-agent teams identify necessary changes?
2. By what process do they decide to institute changes?
3. By what process do they implement changes?

These questions suggest the possibility of determining a developmental pattern of processes within the overall change process.

The 1967 Study

While the major thrusts of the Planned Change Project outlined above emphasize the processes of change, a parallel research effort was initiated in 1967 in order to examine the relationship between school system innovativeness, as one measure of change, and selected dimensions of interpersonal

relationship norms in eight school systems (Hilfiker, 1969). In tne 1967 study, the eight school systems were ranked according to their innovativeness. System innovativeness was determined through the use of rankings for each district from three distinct sources: the district superintendent, the professional staff of the system, and a ranking derived from a panel of ten experts. The expert panel was selected from State Department of Public Instruction personnel who had broad knowledge of each of the school systems. A composite ranking was developed from the three sources, and this was used as a measure of the dependent variable, school system innovativeness.

Selected sections of an instrument designed by the Cooperative Project in Educational Development (COPED) were used to obtain data regarding the interpersonal behavior (independent) variables. These variables were measures of perceptions of interpersonal relationships at three broad levels within each school system: the principals as perceived by teachers, interpersonal process norms of the professional staff, and the interpersonal process norms perceived to exist in professional staff meetings and considered as a problem-solving vehicle for the respective systems. Several sections of the instrument were factor analyzed in order to determine more specific variables. The independent variables studied were:

Staff Perceptions of the Principal

1. Executive professional leadership
2. Social support

Staff Perceptions of School System Interpersonal Process Norms

3. Openness
4. Trust
5. Adaptiveness

Staff Perceptions Regarding Professional Staff Meetings

6. Problem-solving adequacy of meetings
7. Satisfaction with the amount of time devoted to meetings

Staff Perceptions of School System Interpersonal Process Norms Employed in Staff Meetings

8. Openness
9. Powerlessness

General

10. System-finance—expenditure per pupil
11. Age of system personnel

The commonality and significance of the rankings of school district innovativeness by a panel of experts was computed, through the use of Kendall's Concordance, to be .78, significant at the .01 level. The concordance of the rankings among the three sources (professional personnel, superintendents, and the panel of experts) was .86, significant at the .02 level.

Spearman's rank order correlation was used for determining the relationships between the dependent and the independent variables. Those independent variables having a significant relationship ($p < .05$) to school system innovativeness were: social support provided by the principal as perceived by the professional personnel (.01), the perceived problem-solving adequacy of staff meetings (.01), satisfaction with the amount of time devoted to problem-solving in staff meetings (.05), perceived powerlessness in system faculty and administrative council meetings combined as a single variable (.01), and openness (.05) and trust (.01) as interpersonal process norms of the system as perceived by professional personnel. Those variables which did not have a significant relationship ($p > .05$) to system innovativeness were: the executive professional leadership of the principal as perceived by the professional personnel, openness and powerlessness as interpersonal process norms of faculty meetings, and adaptiveness as a school system interpersonal process norm. No significant relationships were found between school system innovativeness and the age of the professional staff or expenditures per pupil.

An outgrowth of interpersonal relationships is the development of interpersonal process norms within a school system. Certain of these norms were found to be related to the innovativeness of the school systems. Those variables that were significant ($p < .05$), when taken collectively, suggested that school systems have a measurable social-psychological climate that can enhance or retard the potential for innovativeness. The results of the study indicated some support for use of organizational climate concepts in theoretical frameworks formulated in connection with interpersonal relations and informal organization.

The major implication suggested by the 1967 study is that the climate of a school system

might be changed in order to make the system more receptive to innovation indigenous to the system and/or originating from sources external to the system. Such changes or alterations of climate might be promoted by the utilization of self-diagnostic instruments, selection or in-service training of staff, and the inclusion of human relations courses in preparation programs for teachers and administrators.

The 1969 COPED Instrument and Its Revision

The COPED instrument utilized for data collection in 1967 was revised by the Planned Change Project team before it was readministered in spring 1969. The revision was an attempt to remedy several shortcomings of the 1967 instrument: the questionnaire required too much respondent time to complete, scoring was complicated and cumbersome, factor analysis indicated that some items could be eliminated, and some of the researchers involved wished to consider other variables. It was deemed essential that the 1969 instrument measure a number of the more promising variables studied in 1967 and thereby make possible an examination of the changes that may have occurred over the two-year period. The emphasis of the present report will be directed primarily toward the status of the eight school systems in terms of factors that are thought to be related to school system innovativeness in 1969, with some attention given to a comparison of 1967 (T_1) and 1969 (T_2) variables.

The T_2 COPED instrument, as revised by the Planned Change Project team, contained the following:

School Personnel Interview	General Variable(s)
I. Biographical Information	Age, Sex, Experience, etc.
II. Climate	
III. Do's and Don'ts (Norms)	Openness, Adaptiveness, and Trust
IV. Meetings	Adequacy in, Powerlessness in, Openness in, Problem-solving in
V. (a) Your Principal	Executive professional leadership, Managerial support, Social support
(b) Support Staff	Influence of support staff
VI. Influence	Influence of various groups associated with education
VII. Innovations	Reasons for not being more innovative
	Trial of classroom innovations, Importance of innovation sources
	Unusual classroom teaching practice
	Communication of innovative ideas
	Degree of consultation about or modification of innovations
VIII. Reaction to Planned Change (Center) Staff	Perceived value of laboratory training, Knowledge of change-agent team
IX. Innovation Process	Determination of various loci of responsibility for innovative process
X. Innovations	Quantitative listing of innovations and the extent of their penetration into system

The eight Wisconsin school systems participating in the Planned Change Project were utilized for the study. Size of each system is indicated by the number of full-time professional staff members employed (teachers, administrators, guidance personnel) and the number of students in each system (see Table 1).

The instrument was administered to a random sample of 33 to 50% of teaching personnel in the systems. All central office staff and principals were included except for normal attrition due to illness or other absence during the administration of the instrument. This sample resulted in the following distribution by school systems (see Table 2).

The questionnaires were administered at the end of the school day or as part of an in-service training period by an R & D Center staff member or by volunteers from within the school system trained by the Center personnel. During the T_1 study, data were obtained from the local superintendents through a highly structured interview.

Table 1

Total Number of Full-time Professional Staff and Students

System	Experimental			Control				
	A	B	C	D	E	F	G	H
Professional Staff	538.8	262.4	80.5	607.1	146.9	399.7	94.6	270
Students	10,909	4,792	1,462	12,591	2,804	8,415	1,776	4,970

Table 2

Random Sample of Professional Staff Used in Study

System	Experimental			Control				
	A	B	C	D	E	F	G	H
Teachers	259	88	34	201	56	99	30	123
Principals	9	9	3	17	7	10	3	14
Central Office Staff	13	6	4	23	3	6	2	19

That technique was abandoned for the T_2 data collection. Instead, the superintendent was asked to complete the same instrument package as that given to central office personnel.

The present study focused upon the limited number of variables listed below.

Staff Perceptions of School System Interpersonal Process Norms

1. Openness
2. Trust
3. Adaptiveness

Staff Perceptions of School System Interpersonal Process Norms Employed in Staff Meetings

4. Openness
5. Powerlessness

Staff Perceptions Regarding Professional Staff Meetings

6. Problem-solving adequacy
7. Satisfaction with the amount of time devoted to problem-solving

Staff Perceptions of the Principal

8. Executive professional leadership of principal(s)
9. Social support extended to staff by principal(s)

Staff Perceptions of Influence

10. Influence of groups internal and external to the system*

Staff Perceptions of School System Climate

11. General satisfaction with system*

General and Biographical Data

12. Age
13. Years experience in education*
14. Formal education*
15. General satisfaction with present position*

Innovativeness of System

16. Source of innovations*
17. Reasons for not being more innovative*

(continued on facing page)

*T_2 variables which do not have comparable data from T_1 but which are examined here as factors which may be related to innovativeness.

Innovativeness of System (continued)

18. Innovativeness of System*

    a. Classroom innovations*
    b. Individual
    c. Innovative class practices*
    d. National innovations

Definitions of variables focused upon in the study which may differ from common usage are included here (Hilfiker, 1969, p. 1-2):

Staff Meeting—formally-called meeting of the professional personnel at the school building or system-wide level.

Problem-Solving Adequacy—the degree to which meetings are characterized by clarity and control of the meeting agenda, the diagnosis and definition of problems, the generation and discussion of possible solutions, the resolution of problems through decision making, and the implementation and evaluation of action steps. (Adapted from COPED Instrument)

Interpersonal Process Norms—implicit standards of interpersonal behavior perceived by members of a group.

School System Climate—an environmental quality described by the prevailing temper, outlook, attitudes or norms as collectively generated by members of the school system.

School System Innovativeness—the degree to which a school system undertakes deliberate, novel, or specific changes, which are thought to be efficacious in accomplishing the goals of the system. Innovations are considered as being willed and planned, rather than occurring haphazardly. (Adapted from Matthew Miles, 1965)

Executive Professional Leadership (EPL)—the degree to which teachers perceive the principal as stressing his obligation to improve the quality of staff performance. (Adapted from COPED Instrument)

Social Support—the degree to which teachers perceive the principal as a warm, socially responsive individual who tends to create an empathic and nonthreatening environment. (Adapted from COPED Instrument)

Powerlessness—a quality of state of being devoid of strength, authority, or resources to act or influence others.

Uninfluential, ineffective, incapable, and forceless as opposed to powerful, forceful, influential, controlling, and self-directed.

Openness—a quality or state of being characterized by ready accessibility, cooperative attitudes, tolerance of internal change, and permissiveness of diversity in social situations.

Unconstraining, accepting, tolerant, nonthreatening, and honest as opposed to confining, concealing, and restricting.

Trust—the degree to which an individual perceives interpersonal relationships as characterized by an assured reliance or confident dependence upon the character, ability, or truthfulness of others.

Credence, confidence, safety, faith, and security as opposed to suspicion, skepticism, and disbelief.

Adaptiveness—the degree to which an individual perceives interpersonal relationships as characterized by a ready capability for modification or changes in social conditions, ways, or environments.

Flexible, changeful, adjustable, pliable, and resilient as opposed to rigid, conforming, inflexible, and undeviating.

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*T_2 variables which do not have comparable data from T_1 but which are examined here as factors which may be related to innovativeness.

II
The Problem

The purpose of this research report is to:

1. Replicate portions of an earlier study (Hilfiker, 1969) which explored the relationship of school system innovativeness and selected interpersonal process norms as perceived by the professional staff.
2. Examine variables, not included in the 1969 study, which may provide knowledge about characteristics of innovative school systems and the planning of change.
3. Relate the findings of the present study to organizational theory, particularly the concept of a "Freudian model" for organizational analysis.

There is general agreement that the "classical" theories of formal organization are not adequate to account for the behavior of individuals or groups who compose the organization. The importance of the informal organization grew from the studies by Roethlisberger and Dickson (1941), and Mayo (1945), and the theoretical frameworks of Blau and Scott (1962), March and Simon (1958), Selznick (1948), and others. Little research has been done in the area of informal organizations in school systems. However, some field studies have been conducted in other service organizations such as hospitals, prisons, and social welfare institutions. These have had some relevance to school systems.

It is the purpose of this section to discuss three concepts which are integrated as a framework for the organizational variables used in the present study: Selznick's (1948) concept of structural-functional analysis of organizations; the concept of organizational health; and Likert's (1967) model of causal, intervening, and end-result variables as they relate to the development of a well-functioning organization. These three concepts appear to present an orderly development from a theoretical "Freudian" model of organizations to the use of organizational variables utilized in a field study setting. The synthesis of these three approaches is presented as a framework to aid in conceptualizing the variables used in the present study.

Structural-Functional Analysis

According to Selznick (1948), the concept of structural-functional analysis means that a social system has certain basic needs, essentially related to self-maintenance; the system develops repetitive means of self-defense; and day-to-day activity can be interpreted in terms of the function served by that activity for the maintenance and defense of the system. These postulates can be described in terms of individual personalities as well as organizations. Selznick stated that the individual has a stable set of needs (most generally the need for maintaining and defending the integrity of his personality or ego); that there are certain recognizable repetitive mechanisms which are utilized by the ego in its defense (such as rationalization, projection, regression, etc.); and that overt and variable behavior may be interpreted in terms of its relation to these needs and mechanisms. He indicated that this represents a typical pattern of structural-functional analysis and maintained that it is possible to speak of a "Freudian model" for organizational analysis. Selznick pointed out that this does not mean that the substantive insights of individual psychology can be applied to organizations, as in the case of relating the individual ego to whole nations, but that the logic and utility of the analysis are important. Indeed, it would appear that the logic of this kind of analysis weakens as an organization increases in size. An organization as large as General Motors, for example, may possess few characteristics usually attributable to humans. This may be due to the fact that as organizations become larger

6/7

they also grow increasingly complex. It therefore becomes improbable that valid predictions can be made from a single relation or a simple formula. In such cases, the problem becomes one of selecting the most promising variables with which to work.

The difficulty of selecting variables in the study of organizations may indeed be due to the same kinds of problems one encounters in the study of humans. The variables may have to do with the organization's (or an individual's) contact with environment, the internal mechanisms for defense of the system, problem-solving and decision-making, self-maintenance, goal-setting, motivation, means of coping with tension and stress, etc. If we assume that an organization is a group of individuals who implicitly agree to work cooperatively toward a common goal, and that as individuals they bring to the organization a variety of human variables in addition to those organic and mechanistic variables of the organization itself, we can begin to become aware of the immense and complex array of variables available for study. Despite this complexity, is it possible to describe the total state or condition of a system in the same way that we describe a healthy individual, i.e., in terms of how they vary psychologically and physiologically?

The Concept of Organizational Health

Miles (1965) has done a considerable amount of exploration with the concept of organizational health, particularly as it applies to school systems. He points out that the absence of illness is not necessarily a definition of health but that positive health would more accurately connote a movement toward growth and development of potentialities of the organization. Miles defines organizational health by proposing ten dimensions which are presented here in abbreviated form:

1. Goal focus. In a healthy organization goals are reasonably clear, accepted, achievable, and appropriate in relation to the demands of the environment [not considered in this paper].

2. Communication adequacy. Information moves reasonably well, with a minimum level of repression and distortion.

3. Optimal power equalization. Basic stance of persons is that of collaboration through an interdependent relationship.

4. Resource utilization. The system's inputs, particularly the personnel, are used effectively [not considered in this paper].

5. Cohesiveness. The members feel attracted to membership in the organization.

6. Morale. A summated set of individual sentiments, centering around feelings of well-being, satisfaction, and pleasure.

7. Innovativeness. System moves toward new goals, invents new procedures, diversifies, and becomes more rather than less differentiated over time.

8. Autonomy. The organization has a degree of independence from the environment.

9. Adaptation. Adequate, continued coping of the organization occurs as a result of changes in the local system or in the environment.

10. Problem-solving adequacy. The organization conceives its operations as controllable and actively copes with problems, invents possible solutions, and implements and evaluates them.

Of these dimensions Miles indicated that goal focus presents major difficulties for educational organizations; particularly the appropriateness of goals in terms of their congruence with the demands of the environment. Studies have shown that parents and teachers often have different expectations concerning the appropriate societal missions or objectives of the school. There is little evidence to indicate whether or not agreement as to the appropriateness of the goals of a given system is necessary for organizational health. Educational systems, considered as organizations, rarely evaluate their stated goals in terms of achievement of objectives. In a situation where this has been done, substantial change in classroom practice is unlikely.

In addition to goal focus, another dimension which is not considered in this paper is resource utilization. This dimension could be defined as the degree to which an individual (educator) is working up to his potential with a measure of congruence between his disposition and the role demands of the system. The determination of an individual's potential and/or his potential contribution to a school system is an extremely complex question which may lead to hazardous philosophical byways. The other eight dimensions listed by Miles are included in the present study; if not

examined explicitly they are treated as variables which are a part of the broader scope of organizational theory.

Likert's Model: The Human Organization

Likert (1967), in his research on management and business organizations, proposed a model for science-based leadership in organizations which is rooted in a theory of social rather than economic motivation. He has designed an instrument which determines scores based on seven operating characteristics of an organization: motivation, communication, interaction, decision-making, goal-setting, control, and performance. By utilizing a five-point scale on each of the seven variables, Likert was able to determine whether an organization was (a) exploitive-authoritative, (b) benevolent-authoritative, (c) consultative, or (d) participative. When synthesizing these variables he created a graphic representation of a participative organization (see Figure 1).

While the variables used by Likert have a business organization orientation, the pattern of development has implications for other organizations. The concepts are broad enough to have application to educational systems, i.e., certain leadership behaviors, combined with the existence of organizational or group norms, can result in certain organizational levels of attainment. The Likert model is presented here as a conceptual framework for examining the interrelationships among the variables used in the present study. It provides a means of grouping a number of variables into natural clusters; variables associated with leadership (principals), organizational health (group norms), and organizational attainment (greater innovation and problem-solving). These are shown in a Likert-like schema in Figure 2.

Summary

The major objective of this chapter was to examine three general concepts that are useful in studying organization: Selznick's "Freudian model"; the concept of organizational health; and the pattern of causal, intervening, and end-result variables utilized by Likert in his model of a "human" organization. It is proposed that the Selznick model and the concept of organizational health are complementary to each other. If one accepts the notion of a group or organization as a living organism, then it would follow that such an organism might possess both psychological, as well as physiological, characteristics. The combination of psychological and physiological processes in man makes for a complex entity. There is considerable evidence that these two processes are virtually inseparable and that the health of the organism depends upon the condition of both.

It could be said that both psychological and physiological processes exist in an organization and that some of these take the form of variables which are measurable. Likert's framework provides a method by which such variables can be assembled and studied. While this framework was originally designed for use in studying business organizations, most of the variables have analogues in educational organizations, particularly in school systems. The use of Likert's framework in school systems presents considerable difficulty in the placement of variables in such distinct categories as "casual," "intervening," or "end-result." For example, one of the more important end-result variables for a business organization would be greater net profit or perhaps a better product. Educational systems have not been able to define their "products" or end-result variables with objectivity or consistency. Nevertheless, for the purposes of this study, it is hypothesized that if certain leadership variables exist in combination with specified staff norms within a given school system, the "product" of the system will exhibit change in such variables as innovativeness or increased problem-solving capabilities. This over-all pattern of variables is referred to as a "profile" of an innovative school system.

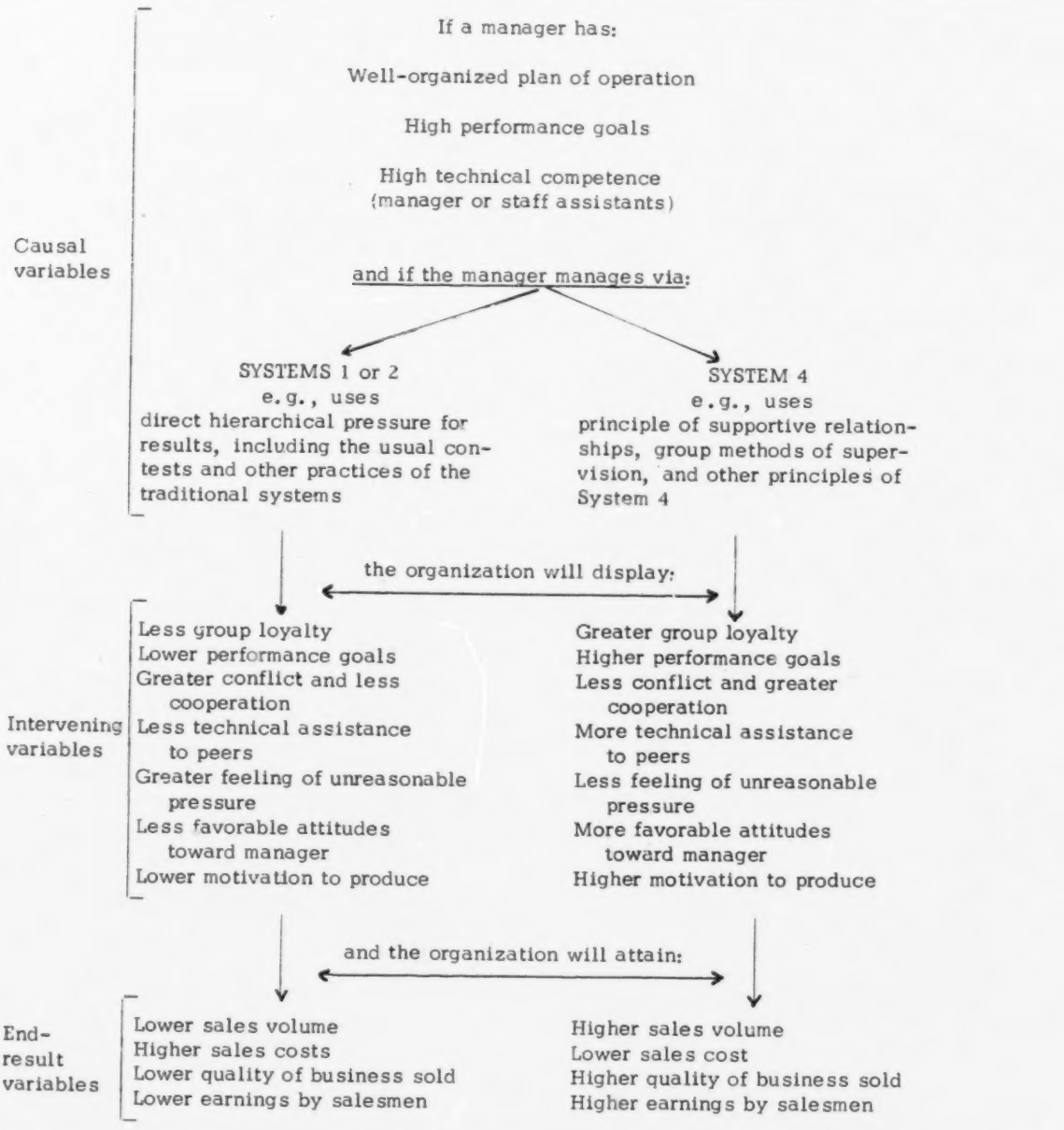
Causal variables
If a manager has:
Well-organized plan of operation
High performance goals
High technical competence (manager or staff assistants)
and if the manager manages via:
SYSTEMS 1 or 2
e.g., uses direct hierarchical pressure for results, including the usual contests and other practices of the traditional systems
SYSTEM 4
e.g., uses principle of supportive relationships, group methods of supervision, and other principles of System 4
the organization will display:
Intervening variables
Less group loyalty
Lower performance goals
Greater conflict and less cooperation
Less technical assistance to peers
Greater feeling of unreasonable pressure
Less favorable attitudes toward manager
Lower motivation to produce
Greater group loyalty
Higher performance goals
Less conflict and greater cooperation
More technical assistance to peers
Less feeling of unreasonable pressure
More favorable attitudes toward manager
Higher motivation to produce
and the organization will attain:
End-result variables
Lower sales volume
Higher sales costs
Lower quality of business sold
Lower earnings by salesmen
Higher sales volume
Lower sales cost
Higher quality of business sold
Higher earnings by salesmen

Fig. 1. Participative Organization Model for Science-based Leadership

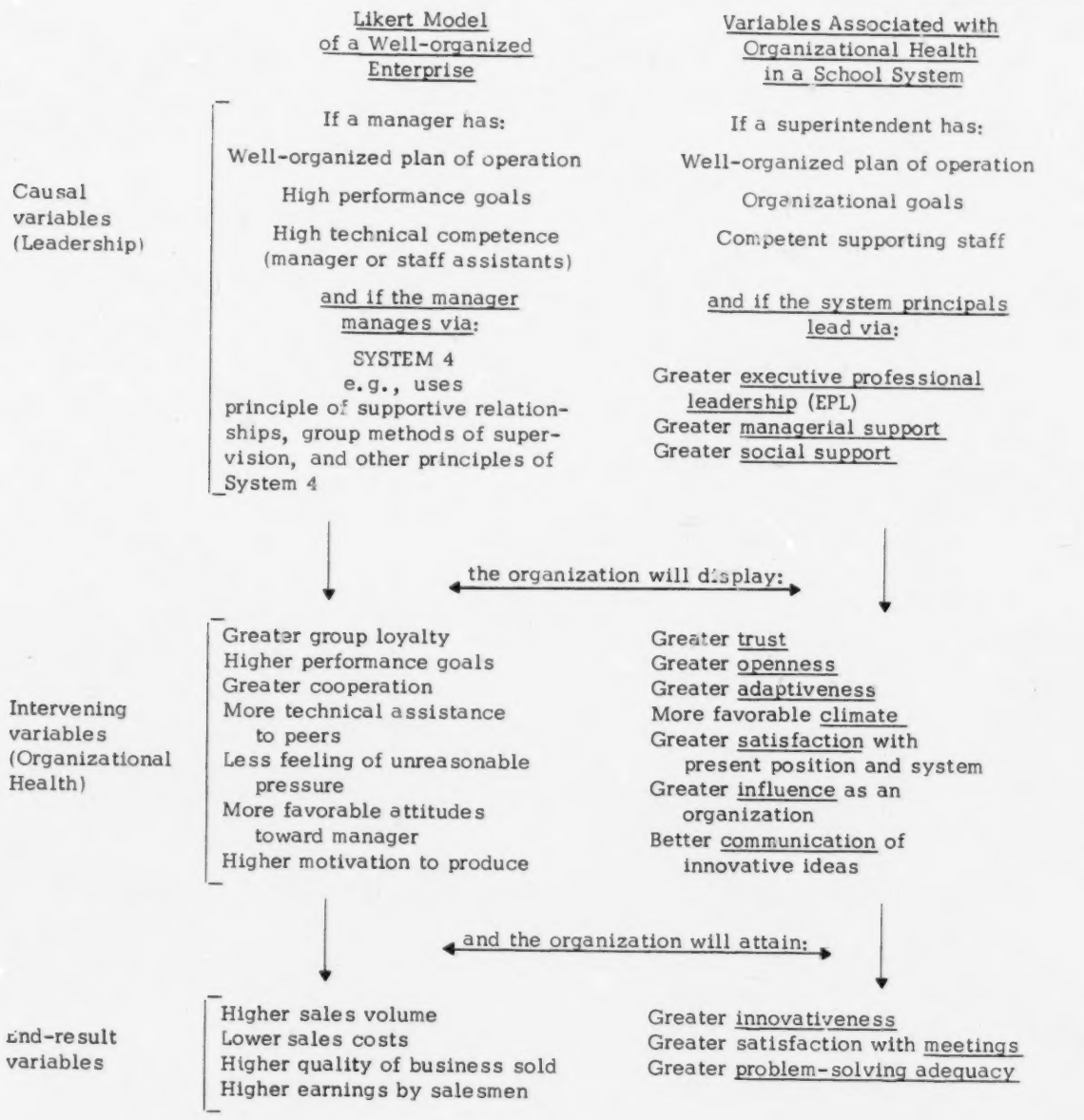
Likert Model of a Well-organized Enterprise
Variables Associated with Organizational Health in a School System
Causal variables (Leadership)
If a manager has:
Well-organized plan of operation
High performance goals
High technical competence (manager or staff assistants)
and if the manager manages via:
SYSTEM 4
e.g., uses principle of supportive relationships, group methods of supervision, and other principles of System 4
If a superintendent has:
Well-organized plan of operation
Organizational goals
Competent supporting staff
and if the system principals lead via:
Greater executive professional leadership (EPL)
Greater managerial support
Greater social support
the organization will display:
Intervening variables (Organizational Health)
Greater group loyalty
Higher performance goals
Greater cooperation
More technical assistance to peers
Less feeling of unreasonable pressure
More favorable attitudes toward manager
Higher motivation to produce
Greater trust
Greater openness
Greater adaptiveness
More favorable climate
Greater satisfaction with present position and system
Greater influence as an organization
Better communication of innovative ideas
and the organization will attain:
End-result variables
Higher sales volume
Lower sales costs
Higher quality of business sold
Higher earnings by salesmen
Greater innovativeness
Greater satisfaction with meetings
Greater problem-solving adequacy

Fig. 2. Relationship of Likert Human Organization Model to School Organization Hea[illegible]

III
Findings of the Study

In this chapter each of the propositions being studied will be stated, and will be followed by a discussion of the findings appropriate to the particular proposition. The discussion will be supplemented by a table containing the data on which each major finding is based. The raw data summaries which were used to formulate the rankings appear in the Appendices. In general, these summaries appear in the form of percentages which indicate the percentage of personnel in a system that responded to a given questionnnaire item or series of items. This percentage was multiplied by a constant of 100 which was then used as a whole number item score for each school system. It was thought that percentages provided more information about the school system in regard to a given item than mean scores which were used for analysis of T_1 data. In cases where T_1 data are available for a variable, the rankings are shown with T_2 rankings so that comparisons can be made.

In the treatment of pairs of variable rankings, Spearman's rank order correlation formula was used:

$$\text{Rank Correlation } R = 1 - \frac{6\Sigma d^2}{n^3 - n}$$

where n is the number of individuals or items ranked and d is the rank difference for the i^{th} individual or item. Probability levels (p) were determined through the use of tables formulated by Olds (1938). If table values for p were greater than .10, the value for r was not computed.

The findings are discussed under three headings: the determination of school system innovativeness, a discussion of T_2 variables for which comparable T_1 data were available, and a discussion of T_2 variables which were included as contributing to a more complete analysis of the innovativeness of the participating school systems.

Determination of School System Innovativeness

The determination of school system innovativeness for the T_1 study was made through a series of rather elaborate steps which were described in Chapter I. In that study it was shown that school system innovativeness might be determined in any one of three ways: an inventory of innovations in the system by professional personnel other than the superintendent, an inventory of innovations in the system by the superintendent, and an evaluation of the innovativeness of a system by a team of outside experts. Since the degree of agreement between these three sources was high, the decision was made to incorporate only one of the three methods for the T_2 study, the inventory of innovations by professional personnel.

The T_2 inventory of innovations by professional personnel consisted of four main parts:

1. Classroom changes or innovations made by teachers that do not require coordination from others in system (Appendix G);
2. An estimate of the degree to which teachers perceive the amount of time and energy expended on invention, discovery, and trial of innovations (Appendix G);
3. An inventory of unusual classroom practices which stress pupil participation (Appendix G); and
4. An inventory of the degree of local penetration or utilization of 18 national innovations, as perceived by principals and central office personnel (Appendix H).

In the first three sections described above, the computation of the system innovativeness rank-

Table 3

Composite Ranking of School System Innovativeness

Instrument Series: Source of Rankings	School System							
	Experimental			Control				
Teacher Responses	A	B	C	D	E	F	G	H
Questions 104-109 Development of new teaching practices	3	2	1	7	5	4	8	6
Questions 125-126 Number of innovations and time spent in implementation	6	3	2	7	1	5	8	4
Questions 127-138 Knowledge or use of new methods	3	1	2	4	5	8	7	6
Administrative Responses								
Appendix H; 1, 5, 9, etc. Use of specific innovations in the school system	6	5	1	4	3	2	8	7
Σ	18	11	6	22	14	19	31	23
T_2 Composite Ranking	4	2	1	6	3	5	8	7
T_1 Composite Ranking	6	1	3	2	7	4	8	5
Direction Change	↑	↓	↑	↓	↑	↓	↔	↓
Degree of Shift	2	1	2	4	4	1	0	2

ing was straightforward, i.e., the percentage of responses was summed and the eight systems ranked according to the totals. In the case of the inventory of national innovations (fourth section described above), a mean score was developed by scoring the responses to the question, "How extensively is this practice being used in this system?" After rankings were calculated for all of the four innovation sections a composite ranking was computed for all eight school systems. The composite ranking was then utilized throughout the present study for rank order correlations with other variables. The composite ranking and the instrument sections from which it was derived are shown in Table 3.

Table 3 shows that each system, with the exception of System G, shifted in its composite ranking of innovativeness. Systems A, B, and C have been involved in the 2-year experimental program in which efforts have been made to make the system more innovative and receptive to change. Inputs originating outside the experimental systems were made after the establishment of local change-agent teams. The inputs included: human relations training in personal growth and organizational development, problem-solving skill training, practice in the utilization and internal feedback of research data, and training in the utilization of human resources. A final report on the results of the Planned Change Project, with an elaboration on the effects of human relations training, will be available in 1971. It is mentioned at this point in the present study since one hypothesis connected with the human relations training and the change-agent team project is that the experimental systems receiving those inputs will become more innovative and receptive to change. The degree to which the experimental inputs account for the shifts in the innovativeness of school systems A, B, and C is yet to be determined. Analysis of the data by Goodson and Hagstrom (in press) indicates that there is some evidence (not conclusive) to support the training and change-agent hypotheses.

According to Likert, however, neither the testing of a theory nor the shifting of an organization to a full-scale application of the theory can be hurried, for there is no substitute for ample time to enable the members of an organization to reach a level of skillful and easy, habitual use of new practices. He maintains that 2 or 3 years is usually required to introduce a major change in an organization with less than 200 members, and believes that in organizations with more than 200 or 300 employes, an additional 5 or more years may be required to bring about substantial changes. Consequently, additional time may be needed to determine the full effects of this project (Likert, 1961).

Changeover Time: T_1 and T_2 Variables

The variables studied as a result of the data collection in spring 1967 have been reported in Chapter I. All the variables included in the T_1 study are replicated in the present study with a single exception: the relationship of school expenditures to school system innovativeness. In this section each set of T_1-T_2 variables will be discussed with reference to the appropriate table which summarizes the rankings derived from the raw data.

Norms

Hypothesis 1. There is a significant relationship between school system innovativeness and interpersonal process norms as measured by the degree of adaptiveness, openness, and trust perceived by the professional staff.

The instrument section entitled "Do's and Don'ts" (Appendix C) was factor-analyzed for the T_1 study. As a result of that analysis three factors were found and named: adaptiveness, openness, and trust. Mean scores were developed, by school system, for each of these norms. The scores for the eight school systems were ranked from the highest (1) to the lowest (8). The procedures for the T_2 study were identical except that percentages were utilized for rankings in lieu of mean scores. [Percentages have two main advantages: the range from the highest percentage score to the lowest is generally broad and insights into the relationship of variables other than those under immediate consideration are often provided.] The percentages were transformed into whole number scores by multiplying each percentage by a constant of 100. These scores, which varied according to the number of questionnaire items for each variable, were then summed and the totals ranked for the eight school systems.

Adaptiveness. The questionnaire items used as a measure of adaptiveness and percentage of respondents replying are shown below:

Item 30. Push for new ideas, even if they are vague or unusual.

% responding: "I feel you should."

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	49.3	45.4	64.3	39.4	38.2	51.2	38.5	47.8

Item 33. Try out new ways of doing things even if it's uncertain how they will work out.

% responding: "I feel you should."

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	88.7	80.6	85.7	84.5	82.4	82.6	89.7	80.7

Item 36. Be skeptical about accepting unusual or "way out" ideas.

% responding: "I feel you should not."

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	41.4	45.4	45.2	37.8	50.0	28.1	28.2	34.8

The high-low percentage range on the above items varied considerably—from 9.1 (Item 33) to 25.8 (Item 30). This would indicate that there was substantially more agreement in the response to Item 33 than to either of the other items. School system C consistently ranked high in the total adaptiveness score and in system innovativeness. The T_2 findings reported in Table 4 indicate a rank

Table 4

Relationship of Adaptiveness, as Perceived by Professional Staff, to School System Innovativeness

System:	Experimental A	B	C	Control D	E	F	G	H
1. T_2 Adaptiveness Rank	2	3	1	7	4	6	8	5
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Adaptiveness Rank	2	5	1	7	5	3	8	6
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 above = .85; p < .01

Spearman's r of Lines 3 and 4 above = N.C.[a]

[a]N. C.: Not calculated when p greater than .10.

order correlation of .85, significant at the .01 level. The T_1 results were found to be not significant. However, the T_1-T_2 adaptiveness rankings appear to have changed little over the 2-year period while the innovativeness rankings changed substantially.

Openness. The questionnaire items used as a measure of openness and the percentage of respondents replying are shown below:

Item 28. Tell colleagues what you really think of their work.

% responding: "I feel you should."

	System: Experimental A	B	C	Control D	E	F	G	H
%	30.8	46.3	57.1	33.9	41.2	38.0	33.3	39.8

Item 29. Disagree with your superior if you happen to know more about the issue than he does.

% responding: "I feel you should."

	System: Experimental A	B	C	Control D	E	F	G	H
%	78.1	83.3	83.3	76.9	79.4	80.2	69.2	77.0

Item 31. Ask others to tell you what they really think of your work.

% responding: "I feel you should."

	System: Experimental A	B	C	Control D	E	F	G	H
%	63.2	60.2	76.2	51.8	52.9	61.2	48.7	59.6

Item 32. Point out other people's mistakes, to improve working effectiveness.

% responding: "I feel you should."

	System: Experimental A	B	C	Control D	E	F	G	H
%	41.7	41.7	59.5	41.8	39.7	41.3	41.0	44.7

Item 37. Tell other people what they want to hear, rather than what you really think.

% responding: "I feel you should not."

	System: Experimental A	B	C	Control D	E	F	G	H
%	79.1	83.3	76.2	78.5	79.4	80.2	74.4	66.5

Item 28 had the greatest high-low percentage range with a spread from 30.8 to 57.1. School system C ranked highest in openness (see Table 5). The summaries shown in Table 5 indicate that the rank order correlations for the variables of openness and school system innovativeness are significant at the .02 and .01 level for T_1 and T_2, respectively.

Trust. Only questionnaire Items 34 and 38 were used to provide measures for the variable of trust; those items and the percentage of respondents replying appear below:

Item 34. Stay "cool"—keep your distance from others.

% responding: "I feel you should not."

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	75.5	75.9	73.8	68.9	70.6	76.0	61.5	72.7

Item 38. Trust others to be helpful when you admit you have problems.

% responding: "I feel you should."

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	89.7	90.7	92.9	92.0	88.2	86.8	94.9	84.5

A curious inconsistency appeared in the responses to Items 34 and 38. System F had the highest percentage response for Item 34 and the second lowest response for Item 38. At the same time System G had the lowest percentage response for Item 34 and the highest percentage response for Item 38. Despite this finding both items had relatively high factor loadings from the T_1 factor analysis.

The summary of rankings shown in Table 6 indicates that the rank order correlations for the variables of trust and school system innovativeness are significant at the .01 level for both T_1 and T_2.

Hypothesis 2. There is a significant relationship between school system innovativeness and the executive professional leadership and social support provided by principals as perceived by the professional staff.

Executive Professional Leadership. The entire instrument section entitled "Your Principal" (Appendix E) was marked by a wide range in the percentage responses on each item. This was particularly true of the items measuring EPL: the responses ranged from 19.9 to 89.4%. The school system which consistently ranked lowest was System C. After data analysis was completed an analysis was made to explore the reasons for substantial shifts in System C responses to the "Your Principal" section from T_1 to T_2. It was determined through analysis of data and from personal contracts that considerable dissatisfaction developed among building faculties in school system C over the leadership provided by two principals. The dissatisfaction is

Table 5

Relationship of Openness as Perceived by Professional Staff to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Openness Rank	4	2	1	7	5	3	8	6
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Openness Rank	5	3	1	2	8	4	6	7
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 above = .88; $p < .01$

Spearman's r of Lines 3 and 4 above = .78; $p < .02$

Table 6

Relationship of Trust as Perceived by Professional Staff to School System Innovativeness

System:	Experimental A	B	C	Control D	E	F	G	H
1. T_2 Trust Rank	3	2	1	7	5	4	8	6
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Trust Rank	7	2	1	3	6	4	8	5
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 above = .90; $p < .01$

Spearman's r of Lines 3 and 4 above = .78; $p < .01$

evident wherever questionnaire responses are related to the professional or personal characteristics of principals. Some evidence for this appears in the summary below.

The instrument entitled "Your Principal" contains nine items. Items 70 and 71 provide a measure of EPL; Item 72, managerial support; and Items 73 through 78, social support. The items relating to the variable EPL and the percentage responses by system are shown below. The scale for all nine items was comprised of seven possible responses: never, almost never, occasionally, frequently, almost always, and I do not know.

Item 70. Your Principal: Gives teachers the feeling that they can make significant contributions to improving the classroom performance of their students.

% responding: "Almost Always" and "Always"

	Systems: Experimental A	B	C	Control D	E	F	G	H
%	45.3	38.8	14.3	49.4	44.1	43.8	25.7	44.7

Item 71. Your Principal: Takes a strong interest in my professional development.

% responding: "Almost Always" and "Always"

	Systems: Experimental A	B	C	Control D	E	F	G	H
%	37.4	31.5	5.6	35.8	25.0	34.7	25.7	44.7

A comparison of the system rankings for EPL scores is shown in Table 8. The relationship of EPL to school system innovativeness was not found to be significant at T_2 and can be considered as only suggestive at T_1.

Managerial Support. The variable of managerial support was not included in the hypothesis regarding characteristics of principals. One item, which provides a measure for managerial support, was included in the instrument in order to provide a more complete profile of school principals in each system. The summary rankings of managerial support for the eight systems is included in the "Instrument Profile of Principals," Table 7, page 19.

The instrument question and the percentage responses by school system are shown below.

Item 72. Your Principal: Makes a teacher's life difficult because of his administrative ineptitude.

% responding: "Never" and "Almost Never."

	Systems: Experimental A	B	C	Control D	E	F	G	H
%	56.6	63.9	30.9	64.5	51.4	58.6	64.1	52.8

Social Support. The third characteristic of system principals which was studied was social support. Data for this variable were

Table 7

Instrument Profile of Principals

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
Variables								
1. T_2 Executive Professional Leadership Ranking	3	5	8	2	6	4	7	1
2. T_2 Managerial Support Ranking	5	3	8	1	7	4	2	6
3. T_2 Social Support Ranking	5	2	8	1	7	3	4	6
4. T_2 Principal as a Source of Innovation	3	6	7	2	8	4	5	1
5. T_2 Perceived Influence of Principal	3	5	8	6	4	2	7	1

Table 8

Relationship of Executive Professional Leadership of Principals, as Perceived by Teachers, to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 EPL Rank	3	5	8	2	6	4	7	1
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 EPL Rank	5	6	1	3	7	4	8	2
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 = N.C.[a]

Spearman's r of Lines 3 and 4 = .52; $p < .10$

[a] N.C.: Not calculated when p is greater than .10.

* * * * * * * * *

provided by six questionnaire items. The items and the percentage responses by school system are shown below.

Item 73. Your Principal: Displays integrity in his behavior.

% responding: "Always" and "Almost Always"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	62.6	64.8	33.3	68.9	48.5	63.7	46.1	59.1

Item 74. Your Principal: Puts you at ease when you talk with him.

% responding: "Always" and "Almost Always"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	60.3	71.3	40.4	61.7	41.1	66.9	66.7	54.7

Item 75. Your Principal: Makes those who work with him feel inferior to him.

% responding: "Never" and "Almost Never"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	60.9	69.5	76.2	65.7	45.6	66.1	69.2	55.2

Item 76. Your Principal: Develops a real interest in your welfare.

% responding: "Always" and "Almost Always"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	44.0	39.8	11.9	53.4	32.3	43.0	30.8	48.5

Item 77. Your Principal: Develops a "we feeling" in working with others.

% responding: "Always" and "Almost Always"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	46.7	52.8	16.6	58.2	29.4	47.1	41.0	44.8

Item 78. Your Principal: Rubs people the wrong way.

% responding: "Never" and "Almost Never"

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
%	34.1	49.0	26.2	48.2	22.1	42.9	56.4	26.7

The summary of rankings shown in Table 9 indicates that the rank order correlation for the variables of social support and school system innovativeness was found to be insignificant for data collected for the T_2 study. The T_1 rank order correlation was significant at the .01 level.

Hypothesis 3. There is a relationship between school system innovativeness and interpersonal process norms in faculty meetings, as measured by openness and powerlessness perceived by faculty members.

The meetings instrument consisted of 24 items; five were designed to provide a measure for the norm of openness and eleven were designed to provide a measure for the norm of powerlessness. The remaining eight items were included to provide a total of 24 items which were scored as a measure of the problem-solving adequacy of meetings.

Table 9

Relationship of Social Support of Principals, as Perceived by Teachers, to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Social Support Rank	5	2	8	1	7	3	4	6
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Social Support Rank	6	1	3	2	8	5	7	4
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5
Spearman's r of Lines 1 and 2 = N. C.[a]				p NS				
Spearman's r of Lines 3 and 4 = .95; p < .01				p < .01				

[a]N. C.: Not calculated when p is greater than .10.

In addition, four items were utilized as a measure of the degree of satisfaction with the amount of time devoted to problem-solving in meetings.

The norms of openness and powerlessness are variables which emerged from a factor-analysis of the meetings instrument completed during the T_1 study. The other two variables mentioned above, problem-solving adequacy and satisfaction with the amount of time devoted to problem-solving, are not considered within the main focus of the present study but are included as supplementary data. The meetings instrument and the percentage response totals by school system and scoring procedures are contained in Appendix D. The summaries of the rank correlations for the meetings variables and school system innovativeness are shown in Tables 10 through 13.

Tables 10-13 indicate that none of the four variables derived from the meetings instrument was significantly related (rank order correlation) to school system innovativeness at the .05 level or better. It should be noted, however, that the school system rankings for the norm of powerlessness and the rankings for school system innovativeness were negatively correlated to a significant degree at the .01 level. The same (negative) relationship was found between the rank order correlations of problem-solving adequacy and school system innovativeness. This means, from the statistical standpoint, that these (negative) rank order correlations could have occurred by

Table 10

Relationship of Openness as Perceived in Meetings to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Openness	5	2	7	1	8	4	6	3
2. T_2 Innovativeness	4	2	1	6	3	5	8	7
3. T_1 Openness	7	5	2	3	8	4	1	6
4. T_1 Innovativeness	6	1	3	2	7	4	8	5
Spearman's r of Lines 1 and 2 = N.C.[a]								
Spearman's r of Lines 3 and 4 = N.C.[a]								

[a]N.C.: Not calculated when p is greater than .10.

Table 11

Relationship of Powerlessness as Perceived in Meetings to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Powerlessness Rank	4	7	8	1[b]	5	6	3	2
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Powerlessness Rank	6	1	3	2	8	4	7	5
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5
Spearman's r of Lines 1 and 2 = N.C.[a]								
Spearman's r of Lines 3 and 4 = .97; $p < .001$								

[a]N.C.: Not calculated when p greater than .10.
p was not significant; however, table value for p was (-) .0081. [See discussion above].

[b]Rank of 1 indicates the "highest" score and therefore denotes the least powerlessness.

Table 12

Relationship of Satisfaction with the Amount of Time Devoted to Problem Solving in Meetings to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Satisfaction Rank	1	6	3	7	2	4	8	5
2. T_2 Innovativeness Rank	4	2	1	6	3	5	8	7
3. T_1 Satisfaction Rank	7	5	2	1	8	3	6	4
4. T_1 Innovativeness Rank	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 = .51; $p < .08$.

Spearman's r of Lines 3 and 4 = .69; $p < .04$.

Table 13

Relationship of Problem-Solving Adequacy in Professional Meetings to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 P.S.A. Ranking	6	5	8	1	7	4	3	2
2. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
3. T_1 P.S.A. Ranking	6	1	3	2	8	4	7	5
4. T_1 Innovativeness Ranking	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 = N.C.[a]

Spearman's r of Lines 3 and 4 = .97; $p < .001$

[a]N.C.: Not calculated when p greater than .10.
p was not significant; however, table value for p was (-) .0081. [See discussion, p. 21].

chance less than one time in 100 occurrences. These findings would not be considered unusual were it not for the fact that T_1 results were correlated to a significant degree (in the positive direction). The implications of these findings will be discussed in Chapter IV, "Conclusions and Implications."

Exploratory Research: T_2

The findings involving a number of variables not included in the T_1 study are presented here. The same general format as that used in the preceding section will be used here, i.e., summary tables indicating the rank order correlation between the variable and school system innovativeness. Instrument sections and the percentage response totals are shown in the Appendices. The findings presented here involve variables that are exploratory in nature and have been included as information supplementary to the findings of the major hypotheses. The variables have been associated with school system or organizational innovativeness in previous research or in the development of theory.

School System Climate

The instrument section on climate (Appendix B) contains 12 items thought to be measures of the general level of satisfaction, involvement, or alienation of the professional staff. Of these 12, two items were dropped (24 and 27) in the final tabulation of scores for this section of the instrument; both items were considered to be confusing to respondents. The percentage scores of the remaining ten were summed and the total scores ranked by school system. The summary ranks are shown in Table 14. The correlation of the two rankings is .69, significant at the .04 level. A rank of "1" on the climate section of the instrument indicates the highest degree of satisfaction with the school system.

Analysis of the different items in the climate section indicates that opinions varied substantially by item. For example, summary responses to Item 16 ("I find my job very exciting and rewarding.") varied from 2.4 in System C to 10.3 in System G. The overall finding indicates a general level of personal job satisfaction shown by respondents throughout the eight school systems. At the same time respondents indicated a high degree of dissatisfaction with the "system" as evidenced by the percentage range of Item 19 (32.4 to 44.4), Item 20 (29.9 to 69.1), and Item 25 (15.4 to 37.5).

Table 14 also contains a separate summary of Item 14 which indicates a general measure of satisfaction that a respondent has with his position in the school system. Item 14 asks the question, "Where would you like to be working 5 years from now?" The responses scored for the information used in Table 14 were "In another school system" and "In an area other than education." The data from Item 14 were found to be not significantly related to school system innovativeness.

Formal Education, Age, and Experience of Professional Personnel

The summary data on the formal education, age, and experience of professional personnel are shown in Tables 15 and 16. A significant finding was found in the rank order correlation of the (least) number of years of experience of professional personnel in education and school system innovativeness; i.e., the systems having the least experienced professional staff were found to be the most innovative. It was also found that the systems that had the youngest professional staff members were generally the most innovative (see Table 16). The latter finding was found to be significant at the .10 level, a finding regarded only as suggestive.

Innovativeness: Other Patterns

In order to provide a more complete assessment of the innovativeness of the eight school systems several additional patterns of innovation were examined: the source of innovations, the communication of innovations, sources of perceived influence within the system, and

Table 14

Relationship of Selected Dimensions of School Climate to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Climate Ranking	8	6	5	1	7	4	2	3
2. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
Satisfaction with Present Position								
3. T_2 Satisfaction Ranking	3	6	4	2	7	5	8	1
4. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
Spearman's r of Lines 1 and 2 = .69; p < .04								
Spearman's r of Lines 3 and 4 = N.C.[a]								

[a]N.C.: Not calculated when p greater than .10.

Table 15

Relationship of Amount of Formal Education of Professional Personnel to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Education Ranking	3	2	7	5	6	1[b]	8	4
2. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
Total Years Experience in Education								
3. T_2 Experience Ranking	3	2	1[b]	5	4	7	8	6
4. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7

Spearman's r of Lines 1 and 2 = N.C.[a]

Spearman's r of Lines 3 and 4 = .90; $p < .003$

[a]N.C.: Not calculated when p greater than .10.
[b]Professional staff/least education/experience.

Table 16

Relationship of Age of Professional Personnel to School System Innovativeness

	Experimental			Control				
System:	A	B	C	D	E	F	G	H
1. T_2 Age Ranking	2	4	1[b]	7	5	6	3	8
2. T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
3. T_1 Age Ranking	7	3	5	4	8	1	2	6
4. T_1 Innovativeness Ranking	6	1	3	2	7	4	8	5

Spearman's r of Lines 1 and 2 = .52; $p < .10$.
Spearman's r of Lines 3 and 4 = N.C.[a]

[a]N.C.: Not calculated when p is greater than .10.
[b]Youngest professional personnel.

the reasons given by system professionals for not being more innovative. The findings relating to these variables are presented in this section.

Source and Communication of Innovations

Items 110 through 122, Appendix G, in the instrument are questions which explore possible personal sources of innovative practices. The question presented to the respondent was, "How important is each of the following as a source of your innovations?" The percentage responses and the rankings by system are reported in Table 17. The percentage figures are those respondents who reported the source of innovations as "very important."

None of the sources indicated in Table 17 were found to be (rank order) correlated with

school system innovativeness. However, a strong inverse relationship was found between school principals as a source of innovations and the innovativeness of the system(s). The same result was encountered with supervisors-coordinators as a source of innovations.

Of the sources of innovations listed, the three with the highest percentage responses were own ideas, graduate training, and teachers as a group. More specific sources, i.e., individuals or roles that are more identifiable such as principals, supervisors, or outside consultants, were given lower percentage responses.

Items 123 and 124 were considered a straightforward index of the degree to which respondents discussed innovations with other teachers. The results for the eight school systems are shown in Table 18.

The findings outlined above resulted in a rank order correlation of .52, significant at the .10 level. This finding is regarded as suggestive, particularly since the two top ranking systems in innovativeness also ranked highest in communication regarding innovations.

Table 17

Source of Innovations

Sources of Innovations	System: Experimental A	B	C	Control D	E	F	G	H	Mean %
	% responding "Very Important"								
Item 110 Teacher	27.1	29.9	43.9	36.0	22.7	21.7	18.9	31.8	29.0
Teacher Ranking	5	4	1	2	6	7	8	3	
T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7	
111 Principal	15.4	10.3	7.3	17.0	3.0	10.8	10.8	26.0	12.5
	3	6	7	2	8	4	5	1	
	4	2	1	6	3	5	8	7	
112 Journal	26.2	22.4	14.6	16.2	18.2	15.0	24.3	10.4	18.4
114 Book	28.8	20.6	12.2	13.8	16.7	17.5	27.0	17.5	19.2
Σ	55.0	43.0	26.8	30.0	34.9	32.5	51.3	27.9	
	1	3	8	6	4	5	2	7	
	4	2	1	6	3	5	8	7	
117 Outside Consult.	16.9	12.1	14.6	14.2	7.6	14.2	10.8	14.9	13.1
	1	6	3	4	8	5	7	2	
	4	2	1	6	3	5	8	7	
118 Grad. Training	39.0	33.6	22.0	24.7	28.8	29.2	27.0	31.8	29.5
	1	2	8	7	5	4	6	3	
	4	2	1	6	3	5	8	7	
119 Supervisor	10.8	6.5	12.2	15.0	1.5	9.2	27.0	19.5	12.7
	5	7	4	3	8	6	1	2	
	4	2	1	6	3	5	8	7	
122 Own Ideas	52.2	44.9	48.8	43.3	43.9	44.2	59.5	49.4	48.2
	2	5	4	8	7	6	1	3	
	4	2	1	6	3	5	8	7	

Influence. Another variable closely related to communications concerning innovations and their sources is the pattern of influence of various persons or groups in determining educational matters within the system. The question explored in the present study is, "To what extent do innovative school systems evidence a consistent pattern of sources of influence?" Respondents to the instrument were asked to indicate the relative degrees of influence that various groups or persons had regarding educational matters. Other than curriculum or policy, the "educational matters" were not specified for respondents. The responses were on a five-point scale varying from no influence to a great deal of influence (see Appendix F).

The findings from the influence section of the instrument are reported in Table 19. None of the persons or groups considered as loci of influence internal to the system (Items 85-90) were found to be significantly correlated with system innovativeness. Curriculum personnel, as a group, were found to be negatively correlated to a significant degree. National Research and Development Centers, as organizations external to the school system, were found to be correlated significantly at the .05 level.

Superintendents were perceived as being the most influential, followed by school boards and principals. Teachers, as an unorganized group, were perceived to be more influential than teachers' organizations. The Upper Midwest Regional Educational Laboratory (UMREL) and the Wisconsin Research & Development Center for Cognitive Learning, as organizations external to the school system, had insufficient data upon which a ranking could be computed.

Reasons for Not Being More Innovative. Instrument Items 95-103 (See Table 20) were designed to provide information regarding the reasons respondents perceive themselves or others as not being more innovative. No rank order correlation with system innovativeness was computed for this section. An analysis of the mean percentage responses indicated that the highest percentage of respondents listed the following reasons for individuals not being more innovative: "Most people prefer to wait until more is known about an innovation before trying it." (72% completely agree or somewhat agree), "Personnel in our system would be more innovative if funds were available to support creative projects." (64%), and "Most people don't believe in change for the sake of change." (61%). The lowest percentage (13%) was in response to Item 99: "The administration doesn't support innovation." The overall pattern of responses, not including the perceived problem of funding, seemed to indicate that respondents like things the way they are or that they would prefer to wait until more is known about an innovation. Respondents did not perceive administrators as a major block to innovativeness.

Both the most innovative system (C) and the least innovative system (G) indicated a high percentage of satisfaction with the present rate of change. The same systems responded quite differently to Item 100, "There is little evidence that innovations really improve things." System C had the highest percentage of agreement while System G had the lowest.

Perceptions of teachers and administrators concerning innovative practices occurring in individual school systems are contained in Tables 21 and 22. Table 23 presents a summary of the data found in the two preceding tables.

Table 18

Extent of Communication Regarding Innovations

	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
Item 123 Communication to others "frequently" and "very frequently"	5.8	14.0	14.6	8.9	7.6	6.7	0.0	10.4
Item 124 Your knowledge of others "to some extent" and "quite a bit"	11.2	14.9	9.8	10.1	10.6	11.7	5.4	11.6
Ranking of 123 and 124 combined	7	1	2	4	6	5	8	3
T_2 Innovativeness Ranking	4	2	1	6	3	5	8	7
Spearman's $r = .52$; $p < .10$								

Table 19

Perceived Sources of Influence

% responding: "Great Influence"

Item	Sources of Influence	System: Experimental A	Experimental B	Experimental C	Control D	Control E	Control F	Control G	Control H	Mean %	
85	Board	*27.2	26.9	16.7	37.8	20.6	23.1	12.8	18.0	22.8	
	Ranking	2	3	7	1	5	4	8	6		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
86	Superintendent	51.7	71.3	19.0	33.1	10.3	45.5	41.0	46.6	39.8	
	Ranking	2	1	7	6	8	4	5	3		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
87	Principal	16.9	13.9	4.8	12.0	16.2	25.6	5.1	37.3	16.4	
	Ranking	3	5	8	6	4	2	7	1		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
88	Teachers	7.9	12.0	31.0	7.6	19.1	14.0	10.3	14.9	14.6	
	Ranking	7	5	1	8	2	4	6	3		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
89	Curriculum Personnel	10.6	2.8	7.1	15.9	4.4	14.0	23.1	16.1	11.7	
	Ranking	5	8	6	3	7	4	1	2		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p=(-).0018
90	Teacher Organization	9.3	2.8	4.8	1.2	4.4	4.1	2.6	9.3	4.8	
	Ranking	1	6	3	8	4	5	7	2		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
91	Community	2.3	.9	4.8	1.2	1.5	5.8	2.6	3.7	2.8	
	Ranking	5	8	2	7	6	1	4	3		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p N.S.
92	National Research & Development	3.0	2.8	4.8	.8	.0	1.7	.0	1.9	1.8	
	Ranking	2	3	1	6	7	5	8	4		
	Innov. Rank T_2	4	2	1	6	3	5	8	7	>	p < .05
93	UMREL	.9	.0	2.4	.0	.0	.0	.0	.6	Insufficient Data	
94	Research & Development Center	1.7	1.9	9.8	5.3	.0	.0	.0	.0	Insufficient Data	

Table 20

Reasons for Not Being More Innovative

% responding: "Completely Agree" and "Somewhat Agree"

Reason	Item	System: Experimental A	Experimental B	Experimental C	Control D	Control E	Control F	Control G	Control H	Mean %
Lack of funds	95	79.3	70.1	58.6	76.1	50.0	52.5	59.4	68.9	64.3
Present rate is adequate	96	18.8	28.1	34.2	30.4	31.8	35.8	45.9	30.5	31.9
Not worth time and effort	97	18.2	27.1	17.0	15.8	13.6	17.5	21.6	18.8	18.7
Innovations are change for change's sake	98	65.3	60.8	51.3	64.4	59.1	70.0	54.0	64.9	61.2
Lack of administrative support	99	21.0	10.2	7.3	9.3	16.6	7.5	18.9	15.6	13.3
Little evidence of improvement	100	13.0	19.6	26.9	19.4	21.2	19.2	10.8	16.2	18.2
Careers jeopardized	101	22.5	23.4	29.3	19.0	19.7	26.6	32.4	30.5	25.4
School norms	102	30.8	17.8	19.5	17.0	31.8	13.3	29.7	21.4	22.6
Prefer to wait	103	78.8	78.5	63.5	76.1	80.3	66.6	67.5	68.8	72.1
Σ:		347.7	335.6	307.6	327.5	324.1	309.0	340.2	335.6	
Rankings:		1	3	8	5	6	7	2	4	
	T_2	4	2	1	6	3	5	8	7	

Table 21

Innovativeness Rankings (Teachers) and
Summary of Ranks by Item

		System							
		Experimental			Control				
	Item	A	B	C	D	E	F	G	H
Developed a new course	104	14	16	24	11	19	13	8	18
Revised existing course	105	26	28	36	22	21	22	16	22
Used material developed elsewhere	106	19	26	19	17	22	28	8	20
Used programs developed elsewhere	107	29	30	31	26	30	30	13	27
Developed new materials	108	30	33	39	23	25	28	16	26
Developed new techniques	109	44	37	48	37	36	38	21	33
	Σ	162	170	197	136	153	159	82	146
	T_2	3	2	1	7	5	4	8	6
	T_1	6	1	3	2	7	4	8	5
Time spent on innovation	125	13	17	12	10	19	11	10	13
Different innovations tried	126	11	13	19	13	13	15	8	14
	Σ	24	30	31	23	32	26	18	27
	T_2	6	3	2	7	1	5	8	4
	T_1	6	1	3	2	7	4	8	5
Pupil participation in planning	127	13	14	14	9	7	6	5	8
Pupil participation in teaching	128	20	27	34	20	18	18	16	20
Small group work	129	38	52	48	37	42	33	27	32
Role playing	130	16	17	19	14	18	13	24	16
Learning games	131	35	42	29	40	28	45	32	31
Pupil questionnaires	132	8	10	14	7	9	6	2	9
Pupil participating in rule planning	133	27	21	31	28	28	27	27	25
Group discussion of problem behavior	134	28	32	24	29	28	23	40	25
Pupil involvement in community projects	135	8	8	7	6	10	10	13	9
Interpersonal relation units	136	16	24	22	20	16	15	16	20
Community pool	137	11	9	7	10	16	9	5	9
Pupils as helpers of other students	138	40	36	41	36	36	35	29	32
	Σ	260	292	290	256	256	240	236	236
	T_2	3	1	2	4	5	8	7	6
	T_1	6	1	3	2	7	4	8	5

Table 22

Mean Scores: Innovative Practices (Administrators)

Mean Scores of responses to "How extensively is this practice being used in your building, and should it be introduced?"

Innovations[a]	System							
	Experimental			Control				
	A	B	C	D	E	F	G	H
1. Year-Round School	1.38	1.66	1.71	.70	.55	.62	.75	.52
2. Change-Agent Team	.19	.00	.14	.13	.00	.18	.00	.38
3. After-School Study Center	.34	.20	.66	.29	.33	.25	.25	.30
4. Middle School	.68	1.60	.42	.78	.33	1.40	1.00	.80
5. Curriculum Council	1.50	1.07	1.85	2.14	1.55	1.00	1.50	1.19
6. Open Enrollment	.07	.80	.42	.10	.77	.18	.25	.33
7. Computer Scheduling	.91	2.15	2.42	1.91	2.12	2.25	.66	2.00
8. Language Laboratory	1.36	1.00	1.57	1.42	2.25	2.12	1.25	1.33
9. Instructional Television	.69	.80	1.00	1.86	1.55	.93	.00	.95
10. Programmed Instruction	.61	1.20	1.14	.82	.88	.93	.50	.76
11. Computer Instruction	.00	.00	.00	.05	.00	.18	.00	.00
12. 8 mm Film	.73	.60	.42	.40	1.22	1.00	.50	1.00
13. Team Teaching	.84	.85	1.72	1.24	1.22	1.06	.25	1.20
14. Teacher Aides	1.08	1.80	2.57	1.07	.66	1.50	1.75	.76
15. Lay Readers	1.20	.53	.28	.66	.44	.60	.25	.11
16. Modern Math	2.73	2.66	2.00	2.61	2.75	2.68	1.75	2.55
17. IPI, 2nd. Series	.57	.53	1.42	.69	.88	.75	.00	.71
18. Interact. Proc. Anal.	.15	.06	.71	.50	.00	.37	.00	.36
19. Integrated Curriculum	.69	.40	1.57	1.68	.66	.93	.25	1.05
20. Structural Grammar	.61	.53	1.14	.72	.88	.73	1.00	.42
21. Independent Study	1.00	1.06	2.00	.90	1.00	.81	.75	.95
22. Nongraded Classes	1.42	.26	.85	.70	.00	.25	.00	1.30
23. Multigraded Classes	.80	.33	1.00	.73	.12	.37	.00	.95
24. PSSC Physics	1.82	.50	2.20	1.00	3.00	1.62	.00	1.00
25. Schools-within-a-School	.00	1.44	.00	.00	.00	2.75	.00	.00
26. Work Experience Programs	1.37	1.33	1.16	1.33	2.40	1.87	1.00	.60
27. Flexible Scheduling	.11	.55	2.33	.47	.40	.37	.00	.66
28. Initial Teaching Alphabet	.47	.54	.33	.21	.00	.90	.25	.53
29. Foreign Language (Elem.)	.05	.09	1.50	.03	.00	.09	.25	.18
30. Multiunit School	.15	.00	1.83	.93	.28	.60	.00	.40
Σ:	2352	2454	3636	2607	2624	2929	1416	2329
Rankings:	6	5	1	4	3	2	8	7

[a]Defined in the text.

Innovations.

Year-Round School—a school system that is fully operated during an entire 12-month period using a trimester, quarter system, etc. (summer school not included).

Change-Agent Team—a team composed of members respresenting various roles in the school system which is established and maintained to plan and manage change within the system.

After-School Study Centers—centers separate from the local school system which provide a wide range of resources to children and adults.

Middle School—a school organized to encompass Grades 5 through 9 and designed to be socially and academically distinct from and yet complementary to the elementary and senior high schools.

Curriculum Council—a school-system wide group of professional personnel which engages in curriculum planning and coordination.

Open Enrollment—permission for pupils to attend a school building of their choice, even though it is not in their residential area.

Computer Scheduling—allocation of students to classes in the secondary school using an electronic computer.

Language Laboratory—audio equipment arranged to permit individuals to hear speech, practice speaking, and hear playback.

Instructional Television—regularly scheduled, in-class viewing of television instruction, coordinated with instruction by the classroom teacher.

Programmed Instruction—educational material designed to enable each pupil to work at his own pace through sequential steps and receive indication of the correctness of response immediately after completion of a question (may be mechanical or nonmechanical).

Computer-Assisted Instruction—use of computers to make information available to the student or evaluate data for the student.

Eight Millimeter Sound Film—Movie film used in pupil-operated cartridge-loading projectors.

Team Teaching—two or more teachers plan and execute the instructional program for a number of pupils, generally in the same or adjoining rooms.

Teacher Aides—regular employment of personnel to assist the classroom teacher in the performance of nonteaching function.

Lay Readers—regular employment of persons to assist the teacher in reading and grading the written work of pupils.

Modern Math—curriculum and materials stressing new concepts and designed around the "structure of the discipline."

Individualized Prescribed Instruction—independent work on learning materials selected for child's particular needs.

Interaction Process Analysis—instruments used to collect data in the classroom and to analyze interpersonal and group problems.

Integrated Curriculum—subject matter which is presented across discipline boundaries so as to become relevant to problems chosen to be studied or to social problems.

Transformational-Generative or Structural Grammar—system of describing the processes by which English creates sentences. It provides the structure rules which make possible all grammatical patterns of sentences used by English speakers and writers.

Independent Study—regularly scheduled work by individual pupils with a minimum of teacher direction.

Nongraded Classes—pupils assigned to classes on the basis of ability, without regard to traditional one-year steps.

Multigraded Classes—pupils of various ages assigned to a single class comprising two or more grade levels; work in various subjects is determined by the individual pupil's ability.

PSSC Physics—use of curriculum materials and teaching practices developed by the Physical Science Study Committee.

Schools-within-a-School—organization within a physical unit of two or more partially autonomous "schools," each generally having

its own administrative and teaching personnel and students.

Work Experience Programs—students undertake employment, under school guidance, directly related to their educational courses.

Flexible Scheduling—class size, length of classes, and number and spacing of classes vary according to the nature of the subject, type of instruction, and ability and interest of students.

Initial Teaching Alphabet—phonetically constant alphabet of conventional letters and symbols used for early teaching of reading and writing.

Foreign Language in the Elementary School—regularly scheduled instruction in a foreign language (one or more times a week).

Multiunit School—organizational plan which combines teaching teams headed by a unit leader, the use of paraprofessionals, and the existence of an instructional council composed of the unit leaders and the principal.

* * * * * * * * * *

Table 23

Innovative Practices Sections—
Summary of Ranks

	System							
	Experimental			Control				
	A	B	C.	D	E	F	G	H
Teacher Responses								
Series Q 104-109 Development of new teaching practices	3	2	1	7	5	4	8	6
Series Q 125-126 Number of innovations and time spent in implementation	6	3	2	7	1	5	8	4
Series Q 127-138 Knowledge or use of new methods	3	1	2	4	5	8	7	6
Administrative Responses								
Appendix H; 1,5,9, etc. Use of specific innovations in the school system	6	5	1	4	3	2	8	7
Σ	18	11	6	22	14	19	31	23
T_2 Σ Rank	4	2	1	6	3	5	8	7
T_1 Σ Rank	6	1	3	2	7	4	8	5
Section XT_2	6	5	1	4	3	2	8	7

IV
Conclusions and Implications

The conclusions, based upon the findings of this study, are presented in the following section in three parts: (a) a discussion of the variables related to the major hypotheses, (b) a discussion of the variables thought to be related to innovativeness, and (c) a section which integrates the findings into a profile of an innovative school system.

The Major Hypothesis

The findings of this study support some of the hypotheses in varying degrees, while other hypotheses are rejected. The hypotheses were rejected if the level of significance of the rank order correlation exceeded the .05 level. A significance level of .10 was regarded as suggestive and the relationship involved was considered worthy of further exploration. References are made to the findings which resulted from the T_1 study. However, caution must be used in comparing T_1 and T_2 findings since certain inputs were given to Systems A, B and C which were not given to Systems D, E, F, G, and H. These inputs were designed to change the existing level of innovativeness of Systems A, B and C (experimental systems). A research report will be made on the impact of the inputs on the experimental systems.

Hypothesis 1

A significant relationship was found to exist between school system innovativeness and the interpersonal process norms of adaptiveness, openness, and trust. The norm of adaptiveness was not found to be significantly related to school system innovativeness in the T_1 study, a finding which raises the question of whether a collection of creative or innovative individuals necessarily results in an innovative system. Because of refinements in the instrument and a larger sample available for the T_2 study, the investigator feels that, unless there is an overriding factor in the data, the T_2 results can be interpreted with more confidence.

The norms of openness and trust indicate a consistent relationship to school system innovativeness for both the T_1 and T_2 studies, giving further support to the theory of Rogers (1962) linking these variables to creativity and innovativeness.

Hypothesis 2

No significant relationship was found to exist between school system innovativeness and the executive professional leadership and social support provided by principals as perceived by the professional staff. The T_1 study indicated a significant relationship between the variable of social support and school system innovativeness. These (T_2) findings and the "Principal Profile" on Page 19 (see Table 7) raise a number of questions concerning the utilization of the EPL-Social Support section of the instrument in connection with variables of educational change. Is it possible for a highly innovative school system, such as System C, to maintain a high level of innovativeness over an extended period of time despite considerable dissatisfaction among professional staff members as to personal characteristics of a principal? Will the social and psychological energies of staff members, which could normally be applied to the initiation, installation, and maintenance necessary for successful innovation, be dissipated or diverted in an attempt to reduce conflict with the principal? To what extent can individual principals, who give visible support to innovative norms, be helped to bring about meaningful and effective innovation? Further analysis of T_2 data concerning the personal characteristics of principals may produce answers to these questions.

In the present study the principal was not perceived as having a great deal of influence (Table 19) or as being an important source of

innovation (Table 17). These findings do not support the assumption that the role of the school principal, as perceived by the teaching staffs of the eight systems, is one of providing aggressive leadership in the change and innovation process. It would appear that the principal is in a strategic position to provide such leadership. If this is true then the question remains as to what variables might be examined in order to explain differences in staff perceptions of the principal's role as a source of influence and innovation in the system. A study of the relationship between the variables of EPL, social support, influence, innovative support, and the interpersonal process norms explored in the present study could make a valuable contribution to knowledge concerning the establishment and alteration of such norms. Studies of this nature have considerable relevance at the present time since growing decision-making power at the faculty level is currently making the role of the principal transitory and ambiguous. Perceptions of the principal, which predominate in the minds of faculty members, may fluctuate between instructional leader, business manager, curriculum director, bureaucrat, representative of the superintendent, or representative of the faculty. A knowledge of how such perceptions are formed and modified could be invaluable for the training of school administrators.

Hypothesis 3

The four variables associated with professional meetings (openness, powerlessness, adequacy, and satisfaction with amount of time) were not found to be significantly related to system innovativeness for T_2 data. T_1 findings did indicate significant relationships between system innovativeness and powerlessness, adequacy and satisfaction scores. This lack of consistency in the findings can be interpreted in a number of ways: the "Meetings" instrument is not a reliable predictor of innovativeness; perceptions of meetings by professionals should not be analyzed at the system level; and correlates of the variables derived from the "Meetings" instrument, other than innovativeness, might provide more profitable avenues for future exploration. Examination of these relationships leads to questions relevant to a more complete understanding of the social-psychological dynamics of a school building:

1. To what degree is openness, as perceived to exist in meetings, a viable social norm existing within a building as a social system?
2. What is the relationship of powerlessness, as perceived to exist in meetings, to variables associated with characteristics of the principal such as executive professional leadership and social support?
3. What is the relationship of problem-solving adequacy, as perceived to exist in meetings, to social and managerial characteristics of the principal?

The answers to these questions have important implications for teacher training institutions as well as for those specializing in administrative training. If we can assume that professional meetings provide an unrealized opportunity for social interaction and for organizational problem-solving, then research efforts can be directed toward those variables which relate to both process and content activities in meetings. Process, as used here, refers to that part of group interaction which relates to the feelings, needs, and emotions of members, and the relationships between them, rather than to the objective tasks (content) of the group.

Research is needed which will integrate all of the functional aspects of meetings in order to establish a more effective balance between process and content. Figure 3 illustrates a means for conceptualizing the integration of process and content. A typical meeting is illustrated by the vertical axis at Point A; such a meeting consists largely of consideration of objective tasks which might include curriculum planning or developing school policies. A group meeting at Point C would consist of a high degree of process awareness. An example of such a meeting would be a human relations training group or a group formed for the purpose of therapy. Point B illustrates a type of meeting wherein a functional balance is achieved between process and content. The underlying assumption is that process issues are present in most meetings and that if they are not overtly expressed the effect can be disfunctional to the content under consideration.

The meeting variables utilized in the present study represent an effort to examine both process and content areas. Instrument items were used to examine feelings (from time to time in the meeting, people openly discuss the feelings and working relationships in the group) and the effectiveness of the participants in dealing with the objective tasks of the meeting (the group discusses and evaluates how decisions from previous meetings worked out). It is feasible to utilize the process-content dichotomy as a means of conceptualizing the substance of meetings. The relationship

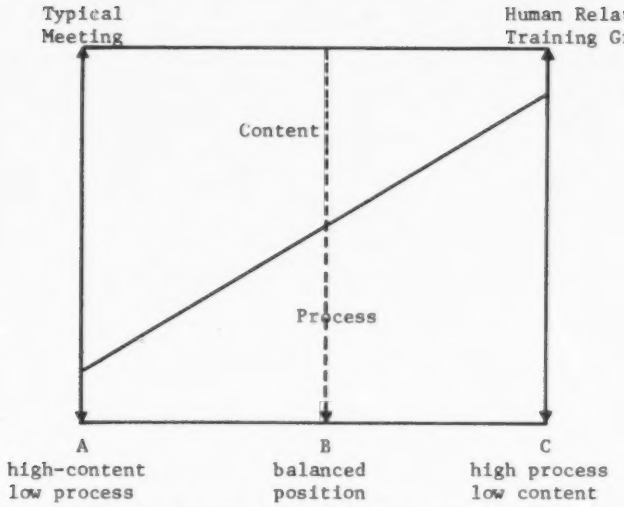

Fig. 3. Integration of Process and Content

between process and content is neither polar nor parallel but is more likely to be conjunctive. One of the difficulties in the dichotomy is that of determining whether a given interaction, occurring within the group context, belongs in the area of process or content, i.e., an interaction between two individuals might be overtly interpreted as being entirely in the area of content because of the nature of the interaction and the manner in which it was delivered, while a knowledge of the covert factors involved might place the interaction largely within the process area.

Another concept used here is that modification in the process and content of meetings can result in greater creativity or innovativeness of the participants in their work setting. At the present time very little research data are available to substantiate this idea. One generalized model of creative systems which has implications for the analysis of the four "meeting" variables examined in this study has been proposed by Mooney (1965).

He maintains that there are four elementary conditions necessary for the existence of a system. It must be: (a) open to its environment, (b) integral in itself, (c) in transactional give and take with its environment, and (4) selectively making fresh fittings (adaptations, innovations, etc.). The circle in

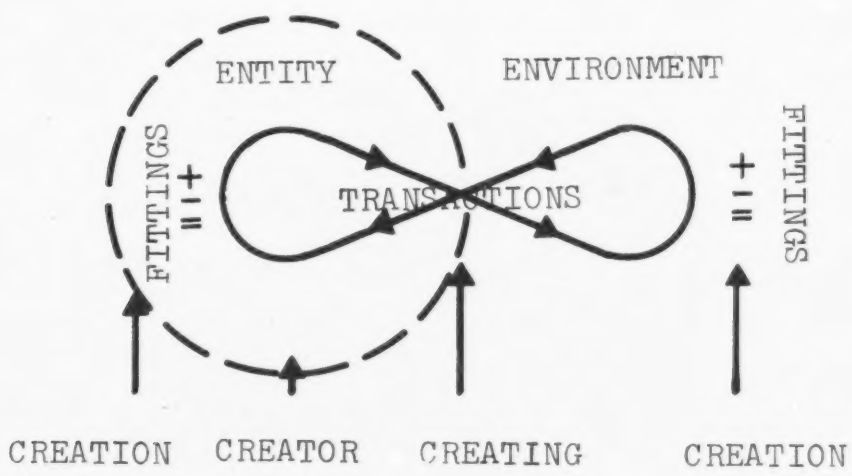

Fig. 4. Mooney's Model of Creative Systems

Figure 4 suggests an integral entity such as a person, institution, or organization. Mooney explains his model shown in Figure 4 in the following paragraph:

> The breaks in the circle are to suggest openness of the entity. The infinity sign is to suggest transactions continuously going on between the entity and its surroundings, i.e., inputs coming in and outputs going out, connected as sequentially relevant in sustaining the system. The plus, minus, and equal signs at both ends of the infinity sign are to suggest the selections of some things from among other things for inclusion, exclusion, or toleration in the transactional operation, forming selective fittings, progressively evolving creations. Creation goes on as the system operates.
>
> Creation increases within a given system with increasing openness, increasing integration, increasing transactional functioning, and increasing selectivity of fittings, all these increases operating in mutual support of one another as they occur.

Several applications of the model are presented, including one for artists, scientists, teachers, and school systems. An adaptation by the writer of the Mooney school system model as it might be utilized at the building level appears below:

In the situation below, the principal and his staff are required to be open in viewing possibilities, emerging conditions, and their own experiences within the system (building), since through meetings they seek to integrate their views and experiences into a flow of transactions. The acts of each serve to mediate a fitting between what is forming in the system (building) and what is forming at the classroom level. According to the model, one might anticipate that communication for the principal and for the teacher would become more satisfying as the "fittings" progressively increase between the teacher(s) and the principal(s) in their respective "roles" as experiential integrators of their respective systems during the integrating, transacting, and selective process of the meetings."

At the present time the model proposed by Mooney utilizes a number of variables which are closely related to those used in this study: openness, communication, transactional functioning, and meetings as a medium for the flow of information necessary to creativity and innovation. While some research has been done with these variables utilizing laboratory or controlled conditions with small groups, few data are available for natural and functional working groups, sometimes referred to as "organizational family groups." One obvious reason for this is that process issues, which bear upon meeting content, become extremely complex in organizational family groups. Research in this area is further complicated when long-term study is undertaken with a

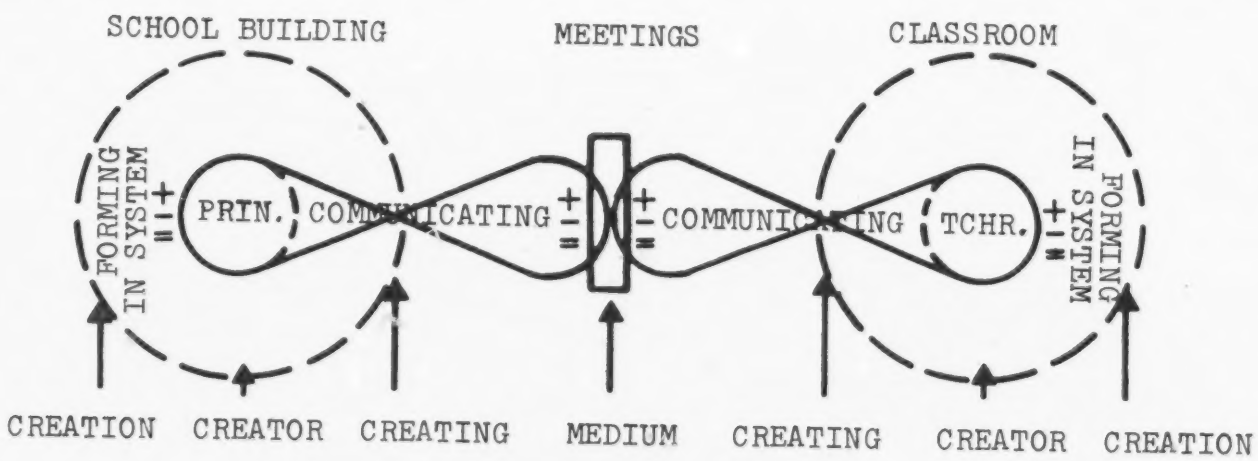

Fig. 5. Adaptation of the Mooney School System Model

family group since the probability of process variables remaining in an uncontaminated state is somewhat remote. Nevertheless, there is a great need to transfer available laboratory research with small groups (and meetings) to a field setting.

One of the major shortcomings in the analysis of the meetings variables in the present study stems from the use of the school system as the unit of analysis. A more logical alternative is the analysis of the natural social setting of the meeting, in this case, the meetings held within a given building. The degree to which variables from the "Meetings" instrument are additive across buildings within a single system is based upon the assumption that influences common to the system are brought to virtually any meeting with the system. This is an assumption for which there is very little support. It is planned that subsequent research with the basic data used in the present study will focus upon the school building as the primary unit of analysis.

Other Variables and Their Relationship to Innovativeness

A number of other variables were studied as ancillary to the major hypotheses. These included variables for which data were available for both T_1 and T_2: problem-solving adequacy of meetings (PSA), satisfaction with the amount of time devoted to problem-solving, and the age of professional personnel. No support was found for the assumption that either variable associated with problem-solving was related to innovativeness at the system level. No significant relationship was found between the age of professional personnel and school system innovativeness.

It is likely that variables associated with problem-solving, as in the case of other variables derived from the "Meetings" instrument, should be analyzed at the building level. Problem-solving will ordinarily be a function of working groups within a particular building. Consequently, varying scores or percentage responses reported and analyzed by buildings will tend to "wash out" when summarized by system. However, it is conceivable that a superintendent of a school system could utilize problem-solving skills in his administrative council meetings which would normally include the principals of the system. If these skills were well developed, a principal, in turn, could be expected to use a problem-solving pattern as a model in group meetings within the building with which he was associated. Considerable research needs to be done in the area of problem-solving as an ongoing activity of schools as organizations. Such investigation would examine questions regarding the impact of problem-solving training within functional groups, particularly the staff members of a single school building. Enough empirical evidence is now available to support the view that problem-solving skills can be substantially improved in groups. There appears to be a tendency, however, for groups that have had training in problem-solving to experience considerable difficulty in adhering to whatever model is used. Often the model is abandoned as an unnecessary gimmick as the group encounters resistances and difficulties in the consideration of controversial or delicate issues. One would anticipate that the utilization of a problem-solving model could funish group members with a degree of psychological comfort as the group progresses toward a solution. Very often this is not the case as members seek to obtain such comfort by evading the eventual need for confrontation of opposing members. For this reason and others, it is necessary to utilize problem-solving models in combination with personal-interpersonal relationship skills . . . skills not presently included in the majority of educator training programs.

No relationship could be found between school system innovativeness and the amount of formal education acquired by professional personnel. A close relationship was found between systems having staff members with a lesser degree of professional experience and innovativeness. The latter finding is congruent with previously reported research which supports the proposition that new group members may exhibit considerable individuality until they become aware of the group's position with reference to generally accepted norms. As an implicit awareness of these norms grows, it becomes evident the individual generally begins a process culminating in the assimilation of the norms of the group. This process can be very brief as in the case of experimental laboratory research on the effect of group pressure in changing individual attitudes, behavior, or perceptions. At the same time, studies of organizations over a period of time have indicated that the implicit pressure to conform to group norms can be a powerful influence on individuals, especially new members of the group.

In order to provide more information on the patterns of influence that existed in the system, a portion of the instrument was designed for this purpose. In addition a section of the instrument was used to determine the perceived

source of innovations within the system. No consistent relationships could be found between the points of influence, the perceived source of innovations, and the innovativeness of the system. However, a number of interesting results were evident in the computation of item response means for the eight-system sample.

In considering the various sources of innovations, respondents listed themselves as a very important source (48%), teachers as a group (29%), and graduate training (29%), followed by books (19%) and journals (18%). The lowest percentages were outside consultants (13%), supervisors (12%), and principals (12%). These findings do not support the commonly held assumption that principals and supervisors are perceived as sources of innovation. If these roles are not regarded as change agents, how are they perceived within the context of the innovative process?

The "Influence" instrument provided additional clues to the answer to the preceding question. The principal was characterized by only 16% of the respondents as having "a great deal of influence" on educational matters in the schools. Curriculum personnel were rated somewhat lower (11%). An analysis of the responses of System C, which ranked first in system innovativeness, disclosed a pattern of influence consistently different from the mean. System C responses indicated a low degree of perceived influence for the board of education (16%), superintendent (19%), and principals (4%). On the other hand, 1% of the System C personnel indicated that teachers had a great deal of influence, substantially more than the mean for the eight systems (14%). The same system ranked first of the eight schools in the sample on a number of other characteristics: adaptiveness, openness, and trust as norms of the system; the youngest and least experienced teaching staff; and the greatest amount of perceived powerlessness. The total pattern appears to be consistent until one considers the last variable—powerlessness. Personnel in System C appeared to feel that they, as opposed to the administration and supporting staff, had the freedom, influence, and human resources to move the system in the direction of greater innovativeness. They felt personal autonomy (Item 17) and believed their jobs to be exciting and rewarding (Item 16). At the same time the staff characteristically did not feel satisfied (Item 20) with things as they were.

A more critical examination of the "Meetings" instrument, from which the factor (variable) of powerlessness was derived, indicates that personnel of System C were dissatisfied with the manner in which meetings are run. Additional evidence as to the primary source of this dissatisfaction (in System C) may be found in the low EPL and social support scores for staff perceptions of the principal. At the same time only 7% of the same staff perceived the administration as not supporting innovation (Item 99).

A Profile of an Innovative School System

A number of generalizations may be made as a result of the present case study of eight school systems. These are presented below as a profile of an innovative school system.

Innovative school systems have:

1. Group norms which indicate a high degree of openness, trust, and adaptiveness.
2. Personnel who are generally younger and have less professional experience.
3. Personnel who perceive fewer obstacles to becoming more innovative.
4. Personnel who are generally satisfied with the existing working climate.
5. Personnel who are generally not satisfied with the problem-solving adequacy of professional meetings.
6. Personnel who are generally satisfied with the amount of time devoted to problem-solving in professional meetings.
7. Personnel who perceive themselves (individually and as a group) as an important source(s) of innovation.
8. Personnel who communicate with others in the system regarding their own innovations or the innovations of others.
9. Administrators who are perceived to support innovation.

Considerable research needs to be done in the area of characteristics of innovative groups in laboratory settings to corroborate empirical evidence now available. Many of the generalizations outlined above could be restated as hypotheses for small-group research under controlled conditions. Because of the exploratory nature of the present study, a number of

GPO 826-380-5

important variables that might account for the innovativeness of the participating schools were not examined. This is particularly true of the leadership behaviors of the administrative staff including the superintendent.

The variables examined in the present study have intrinsic value to school systems aside from the relationship they may have to school system innovativeness. The revised instrument can have considerable value as a diagnostic tool or as a self-evaluation device for school systems or buildings. For example, a knowledge of the degree of openness, trust, problem-solving adequacy, etc., would be of assistance to educational administrators and faculties in the analysis and improvement of organizational problems. The analysis of the results of the instrument, as a local undertaking at the building level, would require cooperation and understanding on the part of all concerned. The administration and analysis of some portions of the instrument could raise a number of sensitive problem areas. Consequently, systems normally need a degree of preplanning before the administration of the instrument and assistance in assessing the results.

Implications

The results of the present study have implications for both the development of theory and for practice. The conceptual framework used for the integration of the variables, as used here, was derived from previous theoretical efforts of Carl Rogers (1962) in creativity, Rensis Likert (1961, 1967) in organizational models, Matt Miles (1965) in innovative norms, and Ross Mooney (1965) in models of creative systems. With the possible exception of Likert, the concepts advanced by the foregoing researchers appear to have a common thread, i.e., that innovativeness can be determined as a norm within a system and that the innovativeness of a group or system might be altered by change strategies which will involve the social-psychological norms of the group. The norm which has been consistently alluded to in the literature is openness, either as an individual or environmental quality which is somehow connected with creativity or innovativeness. Despite the writings and research describing the norm of openness, it remains an ill-defined and elusive quality. The concept of openness very often elicits value judgments, philosophical connotations, and individual ethics. However, the fact that openness may be a matter of individual ethics need not prevent exploration of its impact upon individuals and groups within an organization such as a school system.

As one examines the "profile" of an innovative school system as outlined in Chapter IV, it is apparent that no single theory or change strategy would be adequate or appropriate to deal with the many variables involved. At the same time the variables generally have to do with individual or group perceptions; perceptions which, in some cases, might be altered by change strategies originating within or external to the system. If we accept the proposition that change and innovation is a vital function of a school system operating in the present society, it follows that one may question what strategy of system changing would be most effective, keeping in mind limited financial resources. One of the more promising strategies for altering group norms is the utilization of laboratory training (see Goodson & Hagstrom, in press). Laboratory training generally has three main foci: the individual, the group, and the intergroup dimension which is sometimes referred to as organizational development. There are few strategies available that can be used to alter the social-psychological norms of an organization. There is growing evidence that laboratory training can be used to alter the norms of a group or organization. There is less evidence indicating the extent to which the alteration of these norms, through the use of laboratory training, leads to a more fully functioning organization in terms of goal attainment. One problem in objectively researching the value of laboratory training is that the training focus very often is upon means and processes rather than ends or goals. These processes are often humanistic and existential in character and incorporate such norms as openness, trust, authenticity, and adaptability.

It would appear that strategies for the implementation and successful maintenance of innovations should include a systematic assessment of a number of variables including the social-psychological norms of the system. To the extent that a proposed innovation involves a major adaptation of existing behavioral norms of a system, the norms may become a relevant, if not a critical, variable in the institutionalization of the innovation. If further research lends support to this proposition, teacher and educational administration training programs will need to include more than a cursory look at sociology and psychology, and the relationship of these to organiza-

tional development. The knowledge base for the study of school systems as organizations is weak. Theoretical formulations and models that have developed, particularly in the humanistic disciplines, need to be explored for their potential use in education. Much of what we already know about the innovative process points to the fact that the success or failure of a given innovation cannot be explained by a mechanistic process alone but that the route that an innovation travels is filled with human pressures and constraints. Many of these pressures and constraints, if recognized and delineated, can be used to improve an organization by making it more responsive to change and to its environment.

V
Appendices

Appendix A
Section I—Biographical Information

In order to analyze properly your responses on the various instruments you are filling out, it is necessary to obtain information about you as an individual. These questions are not intended to be "snoopy." Instead, the intention is to gain information which will permit examination of other data in terms of groups of people who have had different backgrounds.

Please answer each question to the best of your knowledge.

Please mark all answers on answer sheet.

1. What is the title of your position?
   - 0 Teacher
   - 1 Principal or Assistant Principal
   - 2 Guidance or Psychological Services
   - 3 Assistant Superintendent
   - 4 Superintendent
   - 5 Curriculum (Supervisor, Director, Coordinator, Consultant, etc.)
   - 6 Other District or Central Office Administrator
   - 7 Board Member
   - 8 Teacher Aide
   - 9 Other

2. At what level do you work?
   - 0 Preschool (nursery and kindergarten)
   - 1 Elementary
   - 2 Middle school or junior high school
   - 3 High school
   - 4 Other
   - 5 Several or all levels

3. Age:
   - 0 20-24 years
   - 1 25-29
   - 2 30-34
   - 3 35-39
   - 4 40-44
   - 5 45-49
   - 6 50-54
   - 7 55-59
   - 8 60 or over

4. Sex:
   - 0 Male
   - 1 Female

5. Years completed in this school system:
   - 0 less than one year
   - 1 1 year
   - 2 2 years
   - 3 3-5 years
   - 4 6-10 years
   - 5 11-15 years
   - 6 16-20 years
   - 7 21 or more years

6. Years completed in this building:
   - 0 less than one year
   - 1 1 year
   - 2 2 years
   - 3 3-5 years
   - 4 6-10 years
   - 5 11-15 years
   - 6 16-20 years
   - 7 21 or more years

7. Number of years experience as a Central Office Administrator:
   - 0 none
   - 1 less than 1 year
   - 2 1 year
   - 3 2 years
   - 4 3-5 years
   - 5 6-10 years
   - 6 11-15 years
   - 7 16-20 years
   - 8 21 or more years

8. Number of years experience as a principal or assistant principal:
   - 0 none
   - 1 less than 1 year
   - 2 1 year
   - 3 2 years
   - 4 3-5 years
   - 5 6-10 years
   - 6 11-15 years
   - 7 16-20 years
   - 8 21 or more years

PLEASE MARK ALL ANSWERS ON THE ANSWER SHEET

9. Number of years experience as a <u>teacher</u>:
   - 0 none
   - 1 less than 1 year
   - 2 1 year
   - 3 2 years
   - 4 3-5 years
   - 5 6-10 years
   - 6 11-15 years
   - 7 16-20 years
   - 8 21 or more years

10. Number of years experience in another capacity in education:
   - 0 none
   - 1 less than 1 year
   - 2 1 year
   - 3 2 years
   - 4 3-5 years
   - 5 6-10 years
   - 6 11-15 years
   - 7 16-20 years
   - 8 21 or more years

11. Total number of years experience in all capacities in education:
(Total of items 7-10 above)
   - 0 none
   - 1 less than 1 year
   - 2 1 year
   - 3 2 years
   - 4 3-5 years
   - 5 6-10 years
   - 6 11-15 years
   - 7 16-20 years
   - 8 21 or more years

12. Marital status:
   - 0 Single
   - 1 Married
   - 2 Divorced or separated
   - 3 Widowed

13. Highest collegiate degree:
   - 0 None
   - 1 A.A. (Junior college or two years of college)
   - 2 Bachelor's Degree
   - 3 Master's Degree
   - 4 Professional diploma (Educational Specialist)
   - 5 Doctorate

14. Where would you like to be working five years from now? (Check one)
   - 0 In this school system
   - 1 In another school system
   - 2 In a university or college
   - 3 In an area other than education
   - 4 Other educational setting

15. If you would like to be working in a school system five years from now, what would you like to be doing?
   - 0 Teacher
   - 1 Principal or assistant principal
   - 2 Superintendent
   - 3 Administrator in a central office
   - 4 Curriculum director, supervisor or coordinator
   - 5 Guidance or psychological service
   - 6 Other

Appendix B
Section II—Climate (Teachers)

The following statements refer to aspects of any school. Please indicate whether you completely agree, somewhat agree, are neutral, somewhat disagree, or completely disagree that the statement describes how you feel about your school.

Please mark all your answers on the answer sheet.

	Completely Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Completely Agree
16. I find my job very exciting and rewarding.	0	1	2	3	4
17. I am just a cog in the machinery of this school.	0	1	2	3	4
18. I feel involved in a lot of activities that go on in this school.	0	1	2	3	4
19. I do things at school that I wouldn't do if it were up to me.	0	1	2	3	4
20. I really don't feel satisfied with a lot of things that go on in this school.	0	1	2	3	4
21. In the long run, it is better to be minimally involved in school affairs.	0	1	2	3	4
22. I have a lot of influence with my colleagues on educational matters.	0	1	2	3	4
23. I feel close to other teachers in this school.	0	1	2	3	4
24. I usually run my classes pretty much to suit myself.	0	1	2	3	4
25. I like this school because you aren't hampered by red tape.	0	1	2	3	4
26. I feel that having close and personal relationships with other teachers is important.	0	1	2	3	4
27. I feel that in this school professional relationships are also friendly.	0	1	2	3	4

Appendix C
Section III—Do's and Don'ts

In any school system, there are informal "do's and don'ts." They are rarely written down anywhere, but they serve as a kind of code, making it clear what people in the system should and should not do, if they are to be accepted by others.

Below are some items that might fit, positively or negatively, into such a code. We are very much interested in assessing what your own attitudes on these items are. Please think about how you, yourself, feel about each of these items. Naturally, your feeling will depend on the particular circumstances involved. Try to consider how you typically feel in most situations.

Place a mark on the answer sheet in the column which shows what your own attitude is. For instance, on Item 28, if you, yourself, feel that you SHOULD tell colleagues what you really think of their work, you would mark column 2 on the answer sheet. If you have NO FEELING ONE WAY OR ANOTHER, mark column 0 on the answer sheet.

SHOULD ONE:	No feeling one way or the other	I feel you should not	I feel you should
28. Tell colleagues what you really think of their work.	0	1	2
29. Disagree with your superior if you happen to know more about the issue than he does.	0	1	2
30. Push for new ideas, even if they are vague or unusual.	0	1	2
31. Ask others to tell you what they really think of your work.	0	1	2
32. Point out other people's mistakes, to improve working effectiveness.	0	1	2
33. Try out new ways of doing things even if it's uncertain how they will work out.	0	1	2
34. Stay "cool"—keep your distance from others.	0	1	2
35. Set up committees which by-pass or cut across usual channels or lines of authority.	0	1	2
36. Be skeptical about accepting unusual or "way out" ideas.	0	1	2
37. Tell other people what they want to hear, rather than what you really think.	0	1	2
38. Trust others to be helpful when you admit you have problems.	0	1	2

GPO 826-380-5

PLEASE MARK ALL ANSWERS ON THE ANSWER SHEET

Appendix D
Section IV—Meetings

The philosopher Martin Buber once said, "All life is meeting." No matter how that statement makes you feel, you will probably agree that school systems hold a lot of meetings, and that much depends on their quality. We are thinking especially of meetings such as faculty meetings, committees, administrative staff meetings, board sessions, department meetings, and the like.

We would like you to consider one of these types of meetings—one which is important to you, and to which you go regularly. Specifically:

39. Name of the meeting you are considering:

_0_ If you are a teacher, principal, or curriculum worker who regularly attends a standing central curriculum committee or council, please consider the meetings of that group.

_1_ If you are a principal (not on a central curriculum group), please consider the meetings of the administrative council or cabinet to which you go.

_2_ If you are a teacher (not on a central curriculum group), please consider the building faculty meetings in your building.

_3_ If you are a school board member, please consider meetings of the Board,

_4_ If you are a superintendent, please consider meetings of the Board.

40. How often does it usually meet?

_0_ once a week
_1_ once every 2 weeks
_2_ once every 3 weeks
_3_ once a month
_4_ once every 2 months
_5_ once a semester
_6_ once a year

41. Length of typical meeting:

_0_ 1/2 hour
_1_ 1 hour
_2_ 1 1/2 hours
_3_ 2 hours
_4_ 2 1/2 hours
_5_ 3 hours
_6_ more than 3 hours

Now, please consider what usually or typically happens in this meeting. For each of the items below, mark one of the following columns on the answer sheet. Use the same scale for items 42 through 65.

_0_ This is not typical at all; it never happens.
_1_ This is quite untypical; it rarely happens.
_2_ This is more untypical than typical, though it does happen some,
_3_ This is more typical than not, but it doesn't happen a lot,
_4_ This is fairly typical of this meeting; it happens quite often.
_5_ This is very typical of this meeting; it happens repeatedly.

42. ___ When problems come up in the meeting, they are thoroughly explored until everyone understands what the problem is.

43. ___ There are many problems which people are concerned about which never get on the formal or informal agenda.

44. ___ There is a tendency to propose answers without really having thought the problems and their causes through carefully.

45. ___ The group discusses the pros and cons of several different alternate solutions to a problem.

46. ___ Someone summarizes progress from time to time.

47. ___ Decisions are often left vague—as to what they are, and who will carry them out.

48. ___ People are afraid to be openly critical or make good objections.

49. ___ The group discusses and evaluates how decisions from previous meetings worked out.

50. ___ People do not take the time to really study or define the problems they are working on.

51. ___ The same few people seem to do most of the talking during the meeting.

52. ___ People hesitate to give their true feelings about problems which are discussed.

53. ___ When a decision is made, it is clear who should carry it out, and when.

54. ___ There is a good deal of jumping from topic to topic—it's often unclear where the group is on the formal or informal agenda.

55. ___ From time to time in the meeting, people openly discuss the feelings and working relationships in the group.

56. ___ The same problems seem to keep coming up over and over again from meeting to meeting.

57. ___ People don't seem to care about the meeting, or want to get involved in it.

58. ___ Some very creative solutions come out of this group.

59. ___ Many people remain silent.

60. ___ When conflicts over decisions come up, the group does not avoid them, but really stays with the conflict and works it through.

61. ___ The results of the group's work are not worth the time it takes.

62. ___ People give their real feelings about what is happening during the meeting itself.

63. ___ People feel antagonistic or negative during the meeting.

64. ___ The discussion goes on and on without any decision being reached.

65. ___ People feel satisfied or positive during the meeting.

* *

Meetings vary according to their primary focus of attention. They may be mainly focused on information giving—making announcements, explaining plans or rules, dealing with routine matters. Or they may be mainly focused on problem solving—discussion and decision, working out problems on the spot. Thinking now of the meeting you have been describing, what percentage of time do you estimate is actually spent on these two kinds of activities? Fill in the figures on the following page on the answer sheet (Items 66 and 67 should total approximately 100%, e.g., 30-39% + 50-59% = 100%).

66. Time spent on information giving:

_0_ 0-9%
_1_ 10-19%
_2_ 20-29%
_3_ 30-39%
_4_ 40-49%
_5_ 50-59%
_6_ 60-69%
_7_ 70-79%
_8_ 80-89%
_9_ 90-100%

Item 66 + Item 67 = approximately 100%

67. Time spent on problem solving:

_0_ 0-9%
_1_ 10-19%
_2_ 20-29%
_3_ 30-39%
_4_ 40-49%
_5_ 50-59%
_6_ 60-69%
_7_ 70-79%
_8_ 80-89%
_9_ 90-100%

Now, still thinking of this meeting, what percentage of time do you think <u>should</u> be or ought to be spent on these two types of activities, as far as you are concerned? (Items 68 + 69 should total approximately 100%.)

68. Time that <u>should be</u> spent on information giving:

_0_ 0-9%
_1_ 10-19%
_2_ 20-29%
_3_ 30-39%
_4_ 40-49%
_5_ 50-59%
_6_ 60-69%
_7_ 70-79%
_8_ 80-89%
_9_ 90-100%

Item 68 + Item 69 = approximately 100%

69. Time that <u>should be</u> spent on problem solving:

_0_ 0-9%
_1_ 10-19%
_2_ 20-29%
_3_ 30-39%
_4_ 40-49%
_5_ 50-59%
_6_ 60-69%
_7_ 70-79%
_8_ 80-89%
_9_ 90-100%

Appendix E
Section V—Part A—Your Principal

To what extent does your principal engage in the following kinds of behavior? In answering, please mark the one column on the answer sheet in each row that best describes the behavior of your principal.

Your Principal:	Never	Almost never	Occasionally	Frequently	Almost always	Always	I do not know
70. Gives teachers the feeling that they can make significant contributions to improving the classroom performance of their students.	0	1	2	3	4	5	6
71. Takes a strong interest in my professional development.	0	1	2	3	4	5	6
72. Makes a teacher's life difficult because of his administrative ineptitude.	0	1	2	3	4	5	6
73. Displays integrity in his behavior.	0	1	2	3	4	5	6
74. Puts you at ease when you talk with him.	0	1	2	3	4	5	6
75. Makes those who work with him feel inferior to him.	0	1	2	3	4	5	6
76. Develops a real interest in your welfare.	0	1	2	3	4	5	6
77. Develops a "we feeling" in working with others.	0	1	2	3	4	5	6
78. Rubs people the wrong way.	0	1	2	3	4	5	6

Section V—Part B—Supporting Staff

79. Most American school systems have many different administrative positions. Usually the school principal is the most important direct contact between a teacher and the rest of the administrative staff, but this is not always true. Which of the following members of the administrative staff has the most influence on your activities and your satisfaction as a teacher in this school system?

_0_ Department chairman in a building
_1_ Assistant Principal of your building
_2_ Principal of your building
_3_ Subject matter coordinator
_4_ Director of Instruction
_5_ Assistant Superintendent
_6_ Superintendent
_7_ Other

80. In your opinion, to what extent does this person help to improve the quality of the educational program in your school?

_0_ Never _1_ Almost never _2_ Occasionally
_3_ Frequently _4_ Almost always _5_ Always

81. In your opinion, to what extent does this person have a real interest in your welfare as a teacher and a person?

_0_ Never _1_ Almost never _2_ Occasionally
_3_ Frequently _4_ Almost always _5_ Always

82. Which of the members of the administrative staff has the next most influence on your activities and your satisfaction as a teacher in this school system?

_0_ Department chairman in a building
_1_ Assistant Principal of your building
_2_ Principal of your building
_3_ Subject matter coordinator
_4_ Director of Instruction
_5_ Assistant Superintendent
_6_ Superintendent
_7_ Other

83. In your opinion, how often does this person help to improve the quality of the educational program in your school?

_0_ Never _1_ Almost never _2_ Occasionally
_3_ Frequently _4_ Almost always _5_ Always

84. In your opinion, how often does this person show a real interest in your welfare as a teacher and a person?

_0_ Never _1_ Almost never _2_ Occasionally
_3_ Frequently _4_ Almost always _5_ Always

Appendix F
Section VI—Influence

In general how much influence do you think the following groups or persons now have in determining educational matters (e.g., curriculum, policy, etc.) in your school? Please indicate how much influence each person or group has by marking the appropriate number on your answer sheet.

	None	A little	Some	Considerable	A great deal
85. The local school board	0	1	2	3	4
86. Your superintendent	0	1	2	3	4
87. The principal of your school	0	1	2	3	4
88. Teachers in general	0	1	2	3	4
89. Curriculum personnel (Supervisor, Director, or Coordinator)	0	1	2	3	4
90. Teacher organizations	0	1	2	3	4
91. Community; Individuals or groups	0	1	2	3	4
92. Research and Development Centers (National)	0	1	2	3	4
93. Upper Mid-West Regional Laboratory	0	1	2	3	4
94. Research and Development Center (Madison)	0	1	2	3	4

Appendix G
Section VII—Innovations

"Innovation is a species of the genus 'change.' . . . a deliberate, novel, specific change, which is thought to be more efficacious in accomplishing the goals of the system." (Mathew Miles, Innovations in Education.) The next sections relate to the manner in which innovations are introduced and practiced in your system.

Instructions: The next 9 items relate to reasons why individuals may or may not be innovative. Indicate how you feel about your school system with regard to each item. Please mark all answers on answer sheet.

	Completely Agree	Somewhat Agree	Neutral	Somewhat Disagree	Completely Disagree
95. Personnel in our system would be more innovative if funds were available to support creative projects.	0	1	2	3	4
96. The present rate of change in our school system is entirely adequate to meet our educational objectives.	0	1	2	3	4
97. Most innovations are superficial and not worth the time and effort required to initiate or maintain them.	0	1	2	3	4
98. Most people don't believe in change for the sake of change.	0	1	2	3	4
99. The administration doesn't support innovation.	0	1	2	3	4
100. There is little evidence that innovations really improve things.	0	1	2	3	4
101. Professional careers are often jeopardized by being associated with unsuccessful innovations.	0	1	2	3	4

	Completely Agree	Somewhat Agree	Neutral	Somewhat Disagree	Completely Disagree
102. The norms of this school system seem to discourage highly experimental or innovative practices.	0	1	2	3	4
103. Most people prefer to wait until more is known about an innovation before trying it.	0	1	2	3	4

Some innovations in education, like flexible scheduling, team teaching, or a major curriculum change, require the activities of different teachers to be coordinated; people must change together. Other innovations are such that an individual teacher can sometimes make the change in his own classroom without requiring that other's activities be coordinated with his (except for procuring small amounts of materials, etc.). We would like to ask some question about this last kind of innovation.

In the last year have you produced or adopted innovations of the following types in your own classroom?

	I have tried no innovations like this	I have tried one or two innovations like this	I have tried more than two innovations like this
104. Developed a new course (for slow learners, new subject, etc.)	0	1	2
105. Revised or reorganized an existing course	0	1	2
106. Used materials developed elsewhere (e.g., cuisenaire rods, tachistoscope)	0	1	2
107. Used techniques or programs developed elsewhere (e.g., programmed instruction, games)	0	1	2
108. Developed new materials myself (e.g., construction of science lab demonstration equipment from homemade materials)	0	1	2
109. Developed new techniques or programs of instruction myself (e.g., new games, new ways of presenting concepts)	0	1	2

GPO 828-380-4

How important is each of the following as a source of your innovations?

		Never a source of innovations	Rarely important	Sometimes important	Very important source
110.	Teacher in this school	0	1	2	3
111.	My principal	0	1	2	3
112.	Magazine or journal	0	1	2	3
113.	Workshop, conference, or institute	0	1	2	3
114.	Book	0	1	2	3
115.	Student	0	1	2	3
116.	Teacher in another school	0	1	2	3
117.	Outside consultants	0	1	2	3
118.	Graduate or undergraduate training	0	1	2	3
119.	Supervisor, coordinator, etc.	0	1	2	3
120.	Guidance worker or counselor	0	1	2	3
121.	Community, groups or individuals	0	1	2	3
122.	My own ideas	0	1	2	3

123. How often in the past year have you discussed innovations you have adopted or developed with other teachers who were not familiar with them?

_0_ I have tried no innovations in the past year
_1_ Never, although I have tried some innovations
_2_ Once or twice
_3_ Several times
_4_ Frequently
_5_ Very frequently

124. To what extent do you feel you know what new practices other teachers are using to improve pupil learning in their classrooms?

___ Not at all
___ A little bit
___ To some extent
___ Quite a bit
___ To a great extent

125. Looking at yourself as a teacher, how much time and energy do you put in on classroom innovations—ones you invented or discovered?

_0_ None
_1_ A little
_2_ Some
_3_ Quite a bit
_4_ A lot

126. During this past year, about how many different classroom innovations would you say you tried out?

0	0 Innovations	5	5 Innovations
1	1 Innovation	6	6 Innovations
2	2 Innovations	7	7 Innovations
3	3 Innovations	8	8 Innovations
4	4 Innovations	9	9 or more Innovations

Here is a list of some new or unusual classroom teaching practices. For each practice, indicate whether or not you have heard of or tried the innovation.

0 Have never heard of it
1 Have not considered trying it
2 Have considered trying it
3 Have tried it but do not use it regularly
4 Am using it regularly

127. ___ Pupil participation in curriculum planning

128. ___ Pupil participation in classroom teaching

129. ___ Having pupils work in small learning teams

130. ___ Role playing (acting out situations)

131. ___ Use of games to aid learning

132. ___ Pupil reactions to classroom climate via questionnaires

133. ___ Pupil participation developing classroom rules

134. ___ Group discussion of problem behavior

135. ___ Involving pupils in community projects

136. ___ Curriculum units that promote skill in interpersonal relationships

137. ___ Community pool (utilizing local citizens as resource personnel)

138. ___ Pupils as helpers or tutors of other pupils

Now we shall ask some questions about the kinds of innovations that require the coordinated efforts of different teachers to be successful.

139. Have you, within the past year, had some idea for an innovation which you believe would improve the working of your school or school system (beyond your own classroom)?

0 Yes
1 No

IF YES, ANSWER THE FOLLOWING QUESTIONS. IF NO, SKIP TO QUESTIONS 154 and 155.

140. What was the general nature of your idea? (Mark the category that most closely applies if your idea overlaps categories.) If you had more than one, choose the most important innovation.

_0_ Curriculum of a given course; subject matter content changes (e.g., new texts for an English course).
_1_ Organization of classrooms and students (e.g., grouping, scheduling, team teaching).
_2_ Organization of teachers and administrators (e.g., use of inservice training time, departments in elementary schools, etc.).
_3_ New equipment
_4_ Changed physical conditions, arrangement of space, etc.
_5_ Changes in the relations between the schools and the community.

Did you communicate your idea to any of the following people?

141. Teacher in my building
_0_ Yes
_1_ No

142. Teacher in another building
_0_ Yes
_1_ No

143. My principal
_0_ Yes
_1_ No

144. My department head
_0_ Yes
_1_ No

145. Supervisor, coordinator, curriculum worker
_0_ Yes
_1_ No

146. Student
_0_ Yes
_1_ No

147. Superintendent
_0_ Yes
_1_ No

148. Board member
_0_ Yes
_1_ No

149. Central Office administrator
_0_ Yes
_1_ No

150. Parent
_0_ Yes
_1_ No

151. Guidance or psychological service worker
_0_ Yes
_1_ No

152. Other
_0_ Yes
_1_ No

153. Was your idea tried out in your school or somewhere else in the school system?
_0_ Yes.
_1_ It's being considered.
_2_ No, it was considered and turned down.
_3_ No, it was not even considered.
_4_ I don't know.

Now think of major innovations that affect the activities of many teachers and require coordinated changes. If you are an elementary school teacher, this might be team teaching or the adoption of a new mathematics program. If you are a high school teacher, this might be adoption of a new program in your subject area or the use of independent study. Based upon your experience in your school system, consider how such major innovations are introduced and modified.

154. To what extent are the teachers affected consulted in the decision to start using the practice?

_0_ Not at all
_1_ A little
_2_ To some extent
_3_ Quite a bit
_4_ To a great extent

155. To what extent may teachers modify the practice?

_0_ Not at all
_1_ A little
_2_ To some extent
_3_ Quite a bit
_4_ To a great extent

Appendix H
Innovations—Principals

Innovative Practices: Use separate answer sheet marked "Innovations: Superintendent and Principals' Form."

Below is a listing of innovations and their definition. Please indicate which are or could be utilized in your school or system and to what extent.

System-Level Organization

A. Year-Round School: A school system that is fully operated during an entire 12-month period using a trimester, quarter system, or similar administrative plan (summer school not included).

1. How extensively is this practice being used in your building?
   _A_ not at all
   _B_ sporadic use only
   _C_ moving toward total use
   _D_ total use: used wherever possible

IF NOT AT ALL: (if your response to Question 1 was "A")

2. Should it be introduced?
   _A_ Yes
   _B_ No

IF SOME USE: (if your response to Question 1 was "B," "C" or "D")

3. When was it initiated?
   _A_ last 6 months
   _B_ last year
   _C_ last 2 years

4. Should it be continued?
   _A_ Yes
   _B_ No

B. Change-Agent Team: A team established and maintained for the purpose of planning and managing change in school systems. Such a team would be expected to have membership representing a variety of roles within the system.

5. How extensively is this practice being used in your building?
   _A_ not at all
   _B_ sporadic use only
   _C_ moving toward total use
   _D_ total use: used wherever possible

IF NOT AT ALL: (If your response to Question 1 was "A")

6. Should it be introduced?
   _A_ Yes
   _B_ No

IF SOME USE: (If your response to Question 1 was "B," "C" or "D")

7. When was it initiated?
   _A_ last 6 months
   _B_ last year
   _C_ last 2 years

8. Should it be continued?
   _A_ Yes
   _B_ No

C. After-School Study Centers: Centers, normally separate from the local school system, which provide a wide range of human, social, and instructional resources to children and adults.

9. How extensively is this practice being used in your building?
   _A_ not at all
   _B_ sporadic use only
   _C_ moving toward total use
   _D_ total use: used wherever possible

IF NOT AT ALL: (If your response to Question 1 was "A")

10. Should it be introduced?
    _A_ Yes
    _B_ No

IF SOME USE: (If your response to Question 1 was "B," "C" or "D")

11. When was it initiated?
    _A_ last 6 months
    _B_ last year
    _C_ last 2 years

12. Should it be continued?
    _A_ Yes
    _B_ No

D. Middle School: A school organization normally encompassing some combination of grades from 5 to 9, the orientation of which is designed to be socially and academically distinct from, yet complementary to, the elementary and high schools.

13. How extensively is this practice being used in your building?
    _A_ not at all
    _B_ sporadic use only
    _C_ moving toward total use
    _D_ total use: used wherever possible

IF NOT AT ALL:

14. Should it be introduced?
    _A_ Yes
    _B_ No

IF SOME USE:

15. When was it initiated?
    _A_ last 6 months
    _B_ last year
    _C_ last 2 years

16. Should it be continued?
    _A_ Yes
    _B_ No

E. Curriculum Council: A school-system-wide group of professional personnel which engages in curriculum planning and coordination.

17. How extensively is this practice being used in your building?
    _A_ not at all
    _B_ sporadic use only
    _C_ moving toward total use
    _D_ total use: used wherever possible

IF NOT AT ALL:

18. Should it be introduced?
    _A_ Yes
    _B_ No

IF SOME USE:

19. When was it initiated?
    _A_ last 6 months
    _B_ last year
    _C_ last 2 years

20. Should it be continued?
    _A_ Yes
    _B_ No

F. Open Enrollment: Permission for pupils to attend a school building of their choice, even though it is not in their residential area.

21. How extensively is this practice being used in your building?
    _A_ not at all
    _B_ sporadic use only
    _C_ moving toward total use
    _D_ total use: used wherever possible

IF NOT AT ALL:

22. Should it be introduced?
    _A_ Yes
    _B_ No

IF SOME USE:

23. When was it initiated?
    _A_ last 6 months
    _B_ last year
    _C_ last 2 years

24. Should it be continued?
    _A_ Yes
    _B_ No

G. Computer Scheduling: Allocation of students to classes in the secondary school using an electronic computer.

25. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

26. Should it be introduced?
A Yes
B No

IF SOME USE:

27. When was it initiated?
A last 6 months
B last year
C last 2 years

28. Should it be continued?
A Yes
B No

Instructional Equipment

A. Language Laboratory: Audio equipment arranged to permit individual members of a class to hear speech, practice speaking, and hear playback.

29. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

30. Should it be introduced?
A Yes
B No

IF SOME USE:

31. When was it initiated?
A last 6 months
B last year
C last 2 years

32. Should it be continued?
A Yes
B No

B. Instructional Television: Regularly scheduled in-class viewing of television instruction, coordinated with instruction on the same material by the classroom teacher.

33. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

34. Should it be introduced?
A Yes
B No

IF SOME USE:

35. When was it initiated?
A last 6 months
B last year
C last 2 years

36. Should it be continued?
A Yes
B No

C. Programmed Instruction: The use of educational material so designed that each pupil works at his own pace through sequential steps, receiving immediate indication of the correctness of response he has given to programmed questions. May or may not involve mechanical devices or "machines."

37. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

38. Should it be introduced?
A Yes
B No

IF SOME USE:

39. When was it initiated?
A last 6 months
B last year
C last 2 years

40. Should it be continued?
A Yes
B No

D. Computer-Assisted Instruction: Computers are used to make information immediately available to the student on his request, and/or to evaluate data fed into the computer by the student.

41. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

42. Should it be introduced?
A Yes
B No

IF SOME USE:

43. When was it intiated?
A last 6 months
B last year
C last 2 years

44. Should it be continued?
A Yes
B No

E. Eight Millimeter Sound Film: Movie film half the usual width, used in pupil-operated cartridge-loading projectors.

45. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

46. Should it be introduced?
A Yes
B No

IF SOME USE:

47. When was it initiated?
A last 6 months
B last year
C last 2 years

48. Should it be continued?
A Yes
B No

Instructional Curriculum

A. Team Teaching: An arrangement in which two or more teachers plan and execute together the instructional program for a number of pupils, generally in the same or adjoining rooms.

49. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

50. Should it be introduced?
A Yes
B No

IF SOME USE:

51. When was it initiated?
A last 6 months
B last year
C last 2 years

52. Should it be continued?
A Yes
B No

B. Teacher Aides: Regular employment of personnel to assist the teacher in the classroom in administrative and other nonteaching functions.

53. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

54. Should it be introduced?
A Yes
B No

GPO 826-380-3

IF SOME USE:

55. When was it initiated?
    A last 6 months
    B last year
    C last 2 years

56. Should it be continued?
    A Yes
    B No

C. Lay Readers: Regular employment of persons to assist the teacher in reading and grading the written work of pupils.

57. How extensively is this practice being used in this building?
    A not at all
    B sporadic use only
    C moving toward total use
    D total use: used wherever possible

IF NOT AT ALL:

58. Should it be introduced?
    A Yes
    B No

IF SOME USE:

59. When was it initiated?
    A last 6 months
    B last year
    C last 2 years

60. Should it be continued?
    A Yes
    B No

D. Modern Math: Any of several mathematics curricula (and materials) stressing newer concepts and designed around the "structure of the discipline."

61. How extensively is this practice being used in your building?
    A not at all
    B sporadic use only
    C moving toward total use
    D total use: used wherever possible

IF NOT AT ALL:

62. Should it be introduced?
    A Yes
    B No

IF SOME USE:

63. When was it initiated?
    A last 6 months
    B last year
    C last 2 years

64. Should it be continued?
    A Yes
    B No

E. Individualized Prescribed Instruction: Each child works independently on lesson materials which testing and diagnosis have determined are appropriate for his particular learning needs.

65. How extensively is this practice being used in your building?
    A not at all
    B sporadic use only
    C moving toward total use
    D total use: used wherever possible

IF NOT AT ALL:

66. Should it be introduced?
    A Yes
    B No

IF SOME USE:

67. When was it initiated?
    A last 6 months
    B last year
    C last 2 years

68. Should it be continued?
    A Yes
    B No

F. Interaction Process Analysis: Instruments are used to collect data in the classroom concerning the way teachers and students interact with each other. Observation systems are used to analyze interpersonal and group problems in the classroom.

69. How extensively is this practice being used in your building?
    A not at all
    B sporadic use only
    C moving toward total use
    D total use: used wherever possible

IF NOT AT ALL:

70. Should it be introduced?
    A Yes
    B No

IF SOME USE:

71. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

72. Should it be continued?
_A_ Yes
_B_ No

G. Integrated Curriculum: Subject matter is presented across discipline boundaries as it becomes relavant to the social problem or problems chosen to be studied. This approach is normally used with flexible scheduling.

73. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

74. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

75. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

76. Should it be continued?
_A_ Yes
_B_ No

H. Transformational-Generative or Structural Grammar: A system of describing the processes by which English creates sentences. It provides the structure rules which make possible all grammatical patterns of sentences used by English speakers and writers.

77. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

78. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

79. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

80. Should it be continued?
_A_ Yes
_B_ No

I. Independent Study: Regularly scheduled work by individual pupils with a minimum of teacher direction.

81. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

82. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

83. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

84. Should it be continued?
_A_ Yes
_B_ No

J. Nongraded Classes: Pupils are assigned to classes on the basis of ability, without regard to traditional one-year steps.

85. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

86. Should it be introduced?
   A Yes
   B No

IF SOME USE:

87. When was it initiated?
   A last 6 months
   B last year
   C last 2 years

88. Should it be continued?
   A Yes
   B No

K. Multigraded Classes: Pupils traditionally assigned to one of two or three sequential vertical grades are assigned to single classes comprising two or more grade levels; work in various subjects is determined by the individual pupil's ability within the limits of the grade-span.

89. How extensively is this practice being used in your building?
   A not at all
   B sporadic use only
   C moving toward total use
   D total use: used wherever possible

IF NOT AT ALL:

90. Should it be introduced?
   A Yes
   B No

IF SOME USE:

91. When was it initiated?
   A last 6 months
   B last year
   C last 2 years

92. Should it be continued?
   A Yes
   B No

Items 93 to 108 to be completed by High School Principals Only. Elementary Principals skip to Page 66, Item 109.

Following is a listing of innovations and their definitions. Please indicate which are or could be utilized in your school or system and to what extent.

A. PSSC Physics: The curriculum materials and teaching practices developed by the Physical Science Study Committee.

93. How extensively is this practice being used in your building?
   A not at all
   B sporadic use only
   C moving toward total use
   D total use: used wherever possible

IF NOT AT ALL:

94. Should it be introduced?
   A Yes
   B No

IF SOME USE:

95. When was it initiated?
   A last 6 months
   B last year
   C last 2 years

96. Should it be continued?
   A Yes
   B No

B. Schools-within-a-school: The organization within a physical unit of two or more partially autonomous "schools," each with its own administrative, supervisory, and teaching personnel and pupils; all "schools" may be under the leadership of a single person, however.

97. How extensively is this practice being used in your building:
   A not at all
   B sporadic use only
   C moving toward total use
   D total use: used wherever possible

IF NOT AT ALL:

98. Should it be introduced?
   A Yes
   B No

IF SOME USE:

99. When was it initiated?
   A last 6 months
   B last year
   C last 2 years

100. Should it be continued?
   A Yes
   B No

C. Work Experience Programs: Programs in which students, while in school or on vacation, undertake employment, under school guidance, directly related to their educational courses.

101. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

102. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

103. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

104. Should it be continued?
_A_ Yes
_B_ No

D. Flexible Scheduling: Situation in which class size, length of class meetings, and number and spacing of classes are varied according to an assessment of the nature of the subject, type of instruction, and ability and interest of students.

105. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

106. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

107. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

108. Should it be continued?
_A_ Yes
_B_ No

High School Principals STOP HERE. Thank you for your cooperation.

Below is a listing of innovations and their definitions. Please indicate which are or could be utilized in your school or system and to what extent.

NOTE: To be Completed by Elementary School Principals Only

A. I/T/A: The Initial Teaching Alphabet, a phonetically constant alphabet of conventional letters and symbols used for early teaching of reading.

109. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

110. Should it be introduced?
_A_ Yes
_B_ No

IF SOME USE:

111. When was it initiated?
_A_ last 6 months
_B_ last year
_C_ last 2 years

112. Should it be continued?
_A_ Yes
_B_ No

B. Foreign Language in the Elementary School: Regularly scheduled instruction in a foreign language (one or more times a week), in the grade-level span from 1 to 6.

113. How extensively is this practice being used in your building?
_A_ not at all
_B_ sporadic use only
_C_ moving toward total use
_D_ total use: used wherever possible

IF NOT AT ALL:

114. Should it be introduced?
A Yes
B No

IF SOME USE:

115. When was it initiated?
A last 6 months
B last year
C last 2 years

116. Should it be continued?
A Yes
B No

C. Multiunit School: An organizational plan combining teaching teams headed by a unit leader, the use of paraprofessionals, and the existence of an instructional council composed of the unit leaders and principal.

117. How extensively is this practice being used in your building?
A not at all
B sporadic use only
C moving toward total use
D total use: used wherever possible

IF NOT AT ALL:

118. Should it be introduced?
A Yes
B No

IF SOME USE:

119. When was it initiated?
A last 6 months
B last year
C last 2 years

120. Should it be continued?
A Yes
B No

THANK YOU FOR YOUR COOPERATION.

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